California State Journal of Medicine.

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IMPORTANT NOTICE!

All Scientific Papers submitted for Publication must be Typewritten. Notify the office promptly of any change of address, in order that mailing list and addresses in the Register may be corrected.

MAY, 1905.

THE A. M. A. MEETING.

The meeting of the A. M. A. will be held at Portland, Oregon, July 11-14, 1905.

EDITORIAL NOTES.

CALIFORNIA'S INVITATION.

To those of the A. M. A. who may journey to the Pacific Coast in July to attend the meeting at Portland we extend a hearty welcome. After you have enjoyed the hospitality of Portland and have seen the magnificent Columbia River territory, come south and let us, of California, entertain you and show you some of the wonders of our own state. From Portland to San Diego, you will find no stretch of country in all this whole United States so varied, so fascinating, so gloriously big and rich in the wealth of nature. We have taken the liberty of reprinting some things about California from those who know and love that whereof they speak, and will ask you to be good enough to turn to page 161 and thus have a fore-taste of what you may enjoy when you visit us. Some of you have been here before and fully realize what a California welcome means; others of you have yet to experience that sensation and to learn just how the word "welcome" is spelled.

INSURANCE EXAMINERS.

The JOURNAL very gladly publishes, on page 160, a letter from the secretary of the Placer County Medical Society on the subject of small fees from large companies for life insurance examinations. Several times has the JOURNAL commented on this subject and urged that physicians throughout the state refuse to make such examinations for a fee less than $5.00. Singularly, it is the so-called "old line" companies, the New York Life and its near relatives who have been receiving the attentions of a gentleman named Lawson, that are at fault in this matter. An examination by an incompetent man is worth less than nothing to the company, so far as protecting it is concerned, and an examination by a competent man is certainly worth the small sum of $5.00, if it is worth anything. Even with good men, sooner or later, cheap fees mean cheap work; and cheap work is, to the company, very costly work. The companies state that it is physicians themselves who are really to blame in this matter, and that offers from physicians of good standing to make examinations for fees less than $5.00 are very common. The JOURNAL has no definite knowledge that this is the case, but quite possibly it is so. There are men in the medical profession, and men of indisputable ability, who are so little regardful of the best ultimate interests of themselves and their fellow physicians that they will resort to almost anything to secure ready money. If this were not the case we would not find the "lodge doctor" and the "contract doctor" evils becoming more and more prominent subjects for discussion in medical societies throughout the country. If the physicians of the state will hark to the request of Placer County, and if they will simply refuse to make an insurance examination for less than $5.00, they will not only be doing themselves a material good but they will also be really aiding the insurance companies and the insured, for they will thus do away with the penny-wise and pound-foolish policy of cheap fees for cheap work, which is in itself a menace to the companies that follow it. The subject is certainly one well worth the careful consideration of every physician who is competent to make an insurance examination worth the making.

THE CUBA COMMISSION.

A short time ago the *New York Herald* sent a "commission" to Cuba to investigate its present sanitary condition. The "commission" went, examined and reported an amazing number of peculiar things. The gist of its report was to the effect that the sanitary condition in the new republic is unspeakably dreadful, and that yellow fever is to be as much feared as before Colonel Gorgas stamped it out. It certainly seems a bit singular that this unofficial and, as claimed by a number of journals, incompetent "commission" should be so at variance with the American Public Health Association, which recently met at Havana and found excellent sanitary condition. The "joker" seems to have been pointed out by *American Medicine*, and in connection with the insurance business, is certainly of interest. Up to the present time, only a very few insurance companies have ventured to do business in Cuba on account of the high mortality, and attendant great risk from yellow fever. The companies that have capital enough to shoulder the risk and write business

in the island, charge enormous premiums on account of this extra-hazardous complication. But since Colonel Gorgas rid Cuba of the pest, some of the smaller companies have been turning longing eyes upon this territory. Obviously, for the smaller companies to recognize the cessation of the extra risk and write insurance at normal rates, would be to force the other companies to do the same thing and thus cut down some of their iniquitous profits. Hence the "Commission" of the *Herald* finds conditions bad; very bad. Is the gentle hand of Mr. Lawson's "System" discernable in this wonderful "commission" and its biased findings?

HALL OF EXHIBITS.

The JOURNAL for July of last year commented upon the disgraceful character of the "Hall of Exhibits," the side-show of the American Medical Association. A member of the Publication Committee was taken to task for this editorial utterance, the argument being that the Trustees of the A. M. A. have nothing to do with this "hall"; that it is always arranged for by the local committee of arrangements; that this committee must provide (and pay for) the various meeting places required, and that consequently the "hall of (disgraceful) exhibits" has to be. That a large percentage of the remedies exhibited are "nostrums" (secret formula "proprietary" preparations), is not denied; that to "promote the use" of such stuff is "derogatory to professional character," is also not denied. In short, it is not denied that the "Hall of Exhibits" has been for years a disgrace to an association which promulgates a "Principles of Ethics"; but, it is denied that the Association, or the Trustees, have any responsibility in the matter! For several years the Trustees have had the Constitution and By-Laws framed just about as they wanted them, and modified from year to year just about as the "committee on constitution" thought they ought to be modified. It does not seem exactly the proper thing, therefore, for the Trustees to hide behind a by-law that is of their own endorsement if not of their own enacting (for many strange and curious—shall we say accidents?—have happened and are happening to the organic law of the Association) and say they have no responsibility. The Association is making a net profit of some $40,000.00 annually, yet it cannot afford to shoulder the expenses of its own meetings, but must needs shove them off upon a local committee, and allow the local committee to prostitute the Association for money. Dr. J. N. McCormack, the organizer of the A. M. A., says, in connection with some remarks upon state society meetings:*

No exhibit should ever be permitted about the hall or its approaches, and the contracts should always require that they be closed during the hours of meeting. Nothing unethical should even be considered for the exhibit rooms, and probably nothing should be admitted which is not advertised in the state journal, where one is maintained.

* *Journal A. M. A.*, March 25, 1905, page 980.

If this is such good, sound advice for state societies, will some one tell us why it does not apply to the aggregate of these state bodies, the A. M. A.? But of course, if the things advertised in the *Journal A. M. A.* were to be admitted, Dr. McCormack's plea for decency would be of no avail.

SHAMELESS FRANKNESS.

These words of commendation for the newly acquired courage of the *Journal A. M. A.* are inspired by an article which appeared in a recent issue, and which we take the liberty of reprinting on page 157. We bespeak your careful consideration of this letter from the owner of the *New York Medical Journal* and the comment thereon by the *Journal A. M. A.* The *New York Medical Journal* has made claim to professional support and patronage on the score of its long service, the high grade of its editorial utterances and the wealth of scientific papers which it has printed. Quite recently, about the first of the year, it ventured to make claim to your support for these reasons and also on the ground that it published only "ethical advertising!" Its advertising pages are notoriously an abomination of desolations, and even its editorial pages have been bartered for coin. The letter from the owner and publisher to advertisers of nostrums, reproduced by the *Journal A. M. A.* in fac-simile and reprinted on page 157 of this JOURNAL, shows the management of the *New York Medical Journal* stripped of the mockery of disguise. No consideration of professional ethics is to limit its greed; no scruples shall deter it from doing its worst to undermine what is best in medicine; no thought for the desires or the wishes of decent and upright medical men shall weigh against the process of coining professional honesty and respectability into dirty, filthy, quackery-stamped dollars. And this is the "medical journal," gentlemen, which you are asked to support! Are the professional men of this country to continue forever to contribute to the support of a man who will openly and avowedly express himself as opposed to all that is for decency in materia medica? Are we going to complacently bear with this sort of insulting avarice? Are reputable medical men to be forever the stool pigeons of the conscienceless publisher of this stripe? Is it not time, gentlemen of the medical profession, that we took thought to ourselves and for our patients and came to a realization of the tremendous harm we are doing our profession and our patients by aiding in the perpetuation of this outrageous prostitution?

THE CANAL SANITATION.

Dr. Reed's observations anent things pertaining to the sanitary condition in the Canal Zone, seem to have stirred up considerable discussion. Dr. Reed is chairman of the Legislative Committee of the American Medical Association; he was sent to the Canal Zone as one of a commission of three, to appraise some real estate. While on the ground, he took advantage of his opportunity

to look into the reported mismanagement connected with the sanitary department of the Canal Commission. At the request of the Secretary of War, Dr. Reed's observations were, upon his return, put in writing and addressed to Mr. Taft; very shortly thereafter they appeared in the *Journal A. M. A.* As to the propriety of publishing this letter, there seems to have been some difference of opinion between Dr. Reed, Mr. Taft and Mr. Roosevelt. The two gentlemen last named regarded it as an official document and as such confidential and not to be made public except with the approval of the Secretary of War, Mr. Taft. Dr. Reed, on the contrary, considered it as a report from himself as chairman of an important committee of the A. M. A., and consequently regarded it as his duty to place his information before the members of the Association. The Canal Commission made a reply to Dr. Reed's charges of incompetence, but the reply is far from satisfactory. The President has since asked for and received the resignation of every member of the former commission—an admiral, a general, four civil engineers and a railroad man—and has appointed an entirely new commission. The new commission is practically a working body of three competent men and it seems probable that they will proceed to clean up the Zone and dig the ditch. In this day and generation the American people want results; they don't want rules, regulations, red tape and explanations; they want just one thing—*results*. That is just the thing they did not get, under the old commission, whose individual members were over jealous of their importance; there was a surfeit of red tape and lengthy explanations. We certainly congratulate the President upon his move, and there is every reason to believe that under the new order of things, Col. Gorgas' efforts will be helped instead of hindered. With the control of yellow fever and estivo-autumnal malaria, will go the successful digging of the ditch; without such control, the canal cannot and never could be completed. If Dr. Reed made a mistake in publishing his report, it would seem to be a very fortunate mistake; not only the committee of the Association of which he is chairman, but the entire Association, should back him up.

THE WILY POLITICIAN.

The physician is the only bread-winner whose duty, conscientiously lived up to, is to work against his own business interests. The whole history of medicine shows an unending effort on the part of its followers to prevent disease; to prevent epidemics; to prevent accidents; and yet it is from the existence of disease and accidental injury that the physician derives his meager support. Medical men have, since a time when the memory of man runneth not to the contrary, recognized that their first responsibility is to the public; that their paramount duty is the safeguarding of the life and health of the citizen. In so far as his work in sanitation and against disease is concerned, no one can dispute the fact that the physician has always done more than his simple duty. But there is another and a greater responsibility which we, too often, have ignored. The conscientious physician should concern himself with the politics of his community. It is his fault if bad or incompetent men are elected to become law makers and by their venality or stupidity do great harm to the community. It is with a full realization of that fact that the JOURNAL takes pleasure in publishing, on page 160, a letter from Dr. Himmelsbach which is directly pertinent. Consider the last legislature; if a man of the Leavitt stripe had been governor of the state, in place of the accomplished physician who occupies that office, the antivaccination bill, a measure drawn by a few brainless cranks and passed by a process of political log-rolling, would have become a law. Had this catastrophy occurred, the "self-complacent citizen," the citizen who is "above" politics and who allows the scum of his district to run the primary elections, and with a shrug of the shoulders takes the consequences, would have been to blame. Unfortunately, too many of us have forgotten this phase of our duty to the state and may well be classed as "complacent citizens." Are we always to be so "complacent?" Are we always to fail of this portion of our duty? Are we always to forget the influence in the community which is ours, if we will but use it, by right of self-sacrificing devotion to the public? In two years there will be another legislature assembled; in two short years there will be other cranks—for the crank never dies and never tires—with other foolish or vicious bills. Is it not our simple, plain duty, to take a hand in the election of those who are to make or mar the laws of our state and thus exercise still more fully our duty to the public in the protection of its units?

SUCH A VIRTUE!

We have received several letters commenting favorably upon the newly acquired virtuous courage of the *Journal A. M. A.*, and congratulating us upon forcing the powers that be in the Association to really promise to do something toward cleaning up the *Journal*. Aside from the statement of the Council on Pharmacy and Chemistry, published in your JOURNAL last month, and some rather interesting editorials, nothing seems to have happened as yet. The *Journal A. M. A.* continues to advertise—without formulas—about the same number of proprietary mixtures. It continues to promote the use of a couple of nostrums which it has previously said, in its editoral pages, should never receive professional recognition, and it also presents for the edification of the members of the Association the advertisement of a remedy which is advertised in nearly every lay periodical published. Possibly there has not been sufficient time in which to attend to these trifling details. If the advertising pages are still unclean, we ought at least to be thankful for a courageous editorial expression anent the subject, and we may look

forward, with feelings of mixed confidence and scepticism, to the future. It certainly is delightful to see the *Journal A. M. A.* actually waking up to the fact that it can no longer enjoy those somnolent dreams of megalomania that permit it to ignore the "undignified" things—unethical advertisements. If the Association is to maintain its position and hold the allegiance of the component bodies, it must take an active part in these questions that are of vital import to the profession, and through its *Journal* it must speak of things that are not abstractly scientific. This, we are glad to see, seems to have been appreciated at last.

A SAD DEATH.

Once more has a physician, realizing full well the danger and the risk of his calling, laid down his life for his patient. Particularly sad is the death of Dr. Albert B. Craig, of Philadelphia, one of the subeditors of *American Medicine*. He was one of the most promising of the younger physicians of Philadelphia, and had been married but 5 months. He was called to attend a patient suffering from the fulminant type of cerebrospinal meningitis, which has been for some time epidemic in the East. The patient was without friends and Dr. Craig devoted himself almost continuously to attendance upon the unfortunate sufferer. The result was disastrous. Ere long Dr. Craig diagnosed the onset of symptoms of the disease in himself, and with thought for the outcome, arranged his affairs and prepared to die. His last words might well be taken to heart by everyone of us, for truly, we, as physicians, may say, "We know not the day nor the hour:" "I am neither ashamed nor afraid to die."

OUR PRESENT CONDITION.

The reports of the various officers of the Society, presented at the recent meeting, show that the Society is in a very healthy condition. Business aggregating over $12,000.00 was transacted without loss and the publications were materially enhanced in value during the year. The JOURNAL has increased 12 pages in size and must shortly be again increased. The Register now includes Oregon and Washington, which has been found to be a very useful addition during the year past. On April 1st there were 1,664 members, but at the time of the present writing there are approximately 1,700. The Society shows a good healthy growth, due to the fact that almost every county society in the state has increased somewhat in membership during the year. Prosecution of illegal practitioners has been undertaken all over the state, and in the vast majority of cases, the result has been conviction, or the illegal chap has run away. Two new county societies were organized during the past year, and arrangements are in the making for the organization of several more during the summer months. The full text of the various reports will appear in the next number of the JOURNAL, and from them it will be evident that the business of the Society has been transacted in a businesslike way, and that the further development suggested is well within the limits of what may safely be undertaken. Owing to the distance from the place of publication, a full report of the meeting in April may not be published till the June number is issued, but the more important matters will be found in this number. It may be interesting to our members to note that their JOURNAL refused to accept 6 pages of advertising which did not comply with the rules adopted by the A. M. A. in 1895 and 1900, in spite of the fact that these things are being advertised in the pages of the Association *Journal* in direct and open violation of these same rules.

TENDON SURGERY.

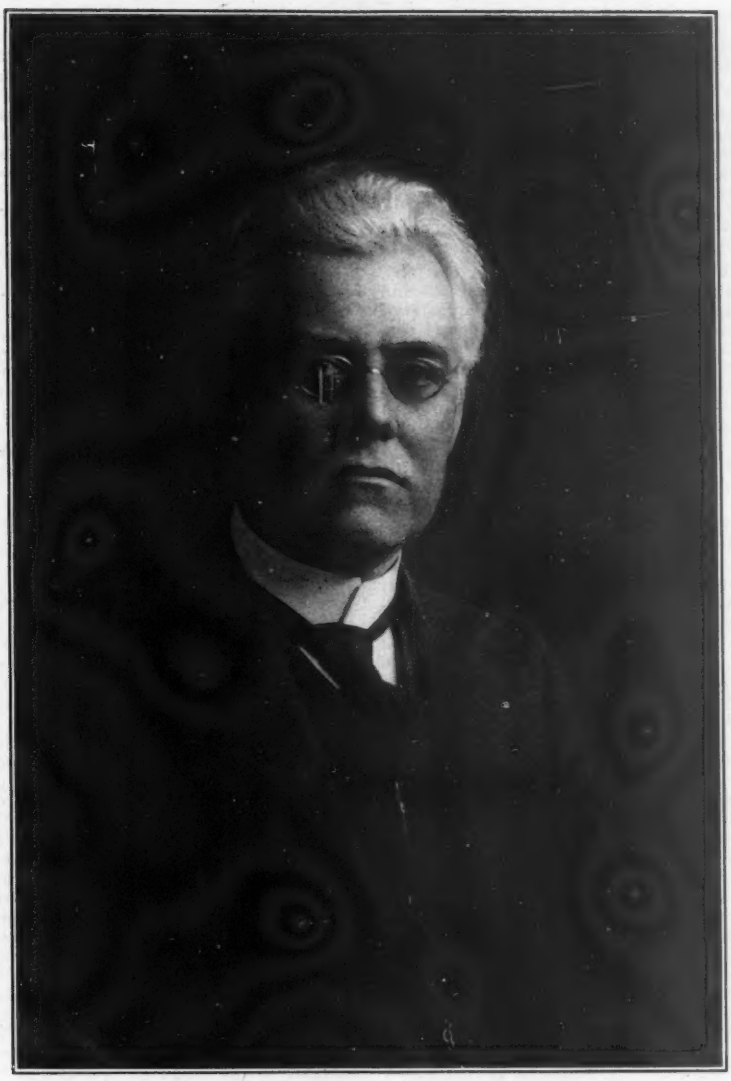
With the present issue, the JOURNAL begins the publication of an essay by Lange on the subject of tendon transplantation. The opinion of those whose special attention has been devoted to this particular field of surgery, is to the effect that the paper of Lange is by far the best presentation of the subject yet printed. It has not appeared in English, up to the present time, and we therefore take pleasure in giving it space. The translator has followed very closely the German text, and this, while in some cases it may detract from the smoothness of style, is rather an added advantage, as it preserves the detail of the original author. As the paper is long it will necessarily be continued through several numbers of the JOURNAL.

Proprietaries in Present Day Prescriptions.

"In the domain of science every fact is a legal tender." Publicity is essential to progress. In medicine secrecy stultifies the calling and its followers, making it the only learned profession of the age which, in so far, yet lingers in the embrace of the middle ages. Obviously no real therapeutic progress is possible where the prescriber and the world is informed only that the triumphant conduct of a certain case from death's door to convalescence has been wrought through the mediumship of "Puffer's Preposterous Painfugine," with the composition of which the enterprising manufacturer has not seen fit to entrust the complacent prescriber.

The present generation is skeptical and becoming more so; it stands in awe of nothing, and the reverential awe with which the layman formerly habitually viewed the physician is rapidly approaching the vanishing point, to which finality nothing is better calculated than this unethical and suicidal practice.

To revert to our proposed classification, considering the first journal at hand, we find advertisements of thirty reputable preparations, seven doubtful, eighteen semi-fakes, and thirteen positive fakes. A less liberal classification would more than double the latter number. Among the latter we find, in the body of an advertisement, a eulogistic notice from the pen of an eminent physician and medical professor, to the effect that he now habitually uses in certain cases lithia in the form of a new salt, the preparation in question. This case fairly illustrates our contention that therapeutic progress is not possible so long as secret medicines are countenanced by reputable physicians. Note this belauded preparation gets full credit, and incidentally the fakir full profit, for the cures which this eminent professor-physician claims as due to this new salt of lithia.—Prof. W. S. Jackman, of Orono, in *Journal of Medicine and Science*, Portland, Feb., 1905.



FRANK L. ADAMS, M. D.
President of the State Medical Society, 1904-1905.

Dr. Frank Lemuel Adams was born in Troy, New York, July 30, 1858, where his father, John Smalley Adams, was engaged in the practice of medicine and surgery. His mother, Ellen Tompkins, was a daughter of Clark Tompkins, an iron manufacturer and inventor of that city and a graduate of Fort Edward Institute.

His father was compelled to come to California on account of failing health. In 1863, accompanied by his wife and son, he crossed the plains in an emigrant wagon and became a resident of this state. He finally located in Oakland and in 1877 formed a partnership with the late Dr. A. H. Agard.

The subject of this sketch received his preliminary education at the public schools, McClure's Military Academy and the Oakland High School. In 1877 he entered the University of California and graduated in 1881 receiving the degree of A. B. In 1883 he graduated from the Cooper Medical College and served one year as interne in the City and County Hospital in San Francisco. He then located in Oakland and was associated with Drs. Agard and Adams in the practice of medicine and surgery until they were both removed by death.

Dr. Adams has served two terms as a member of the Oakland Board of Health and one term as Health Officer; he has also been President of the Alameda County Medical Association. He is a member of the Zeta Psi Fraternity, the Athenian Club, Reliance Club, Nile Club and Claremont Country Club. He is President and one of the founders of the Oakland College of Medicine and Surgery; also professor of clinical surgery in that institution. He is a member and Treasurer of the Pacific Association of Railway Surgeons.

In 1889 he married Mary Wickham Leigh, daughter of Camille Bowie and the late Major John Wickham Leigh. There are two daughters, Nellie Leigh and Camille Bowie Adams. At present he is associated with his cousin, Lemuel Payson Adams, in the practice of medicine and surgery.

ADDRESS OF THE PRESIDENT.

Thirty-fifth Annual Meeting of the Medical Society of the State of California.

FRANK L. ADAMS, M. D., Oakland.

Herbert Spencer has divided education into mental, moral and physical and has shown in his masterly way that a perfect physique and physical well-being are the foundations for the other two. He demonstrates that degeneracy, in plants and animals, as well as man, is sure to follow where the environment is unfavorable and calls attention to the rapid degeneracy observed in large cities caused by long hours of continual toil, foul air, impure water, insufficient food, adulterated food and a lack of outdoor exercise and proper recreation. He says: "Of all bequests of parents to children, the most valuable is a sound constitution." He believes this to be the basis not only of individual but also of general happiness, and shows clearly that the physical well-being of the individual is of paramount importance, not only to the man himself, but to the family, the neighborhood, the city and the state. Again he says: "The well-being of each is involved with the well-being of all in sundry other ways. Whatever conduces to their vigor concerns him, for it diminishes the cost of everything he buys, whatever conduces to their freedom from disease concerns him, for it diminishes his own liability to disease. Whatever raises their intelligence concerns him, for inconveniences are daily entailed on him by others' ignorance or folly. Whatever raises their moral character concerns him, for at every turn he suffers from the average inconscientiousness."

The physician, by reason of his profession, his general education and special training, owes a sacred duty to the state to advance the well-being of his fellow-man. The slums of great cities are not only a reproach to our so-called modern civilization, but also to our own profession. They are physical, mental and moral plague spots and have arisen, as Jacob Riis has shown, largely through the greed of the landlord, who seeks ten, fifteen and twenty per cent upon his capital instead of five per cent, which is considered a high rate in large business centers upon safe investments. It is said that the United States has at the present time, one-twentieth of the entire population of the earth, and one-quarter of its wealth, and yet, in our metropolis of wealth and population, we expose to the thoughtless gaze of the tourist, and the fashionable seeker for adventure and novelty, the shame and disgrace of our great nation.

At the World's Fair in St. Louis, could be seen several models of the tenements in the New York tenement districts. In a single square, hundreds of wretched human beings are crowded, no proper ventilation, no sunlight, one toilet for twenty-five people, and not one bath in an entire block. Three hundred and fifty thousand sleeping rooms in New York City are so-called "inside rooms" and receive air and sunlight, if any, from shafts often only two or three feet in width. In London, thousands upon thousands have insufficient food. Six or eight people eat, live, work and sleep in a single room. In countless instances, it is a well-known fact that one person will occupy a bed for eight hours, a second for eight hours more, and finally a third, will take his turn for his eight hours showing how watchful the modern statesman is for the welfare of his fellow-man. Seven millions for a modern battleship, an engine for maiming, murdering and destroying while our boards of health are denied the pittance needed for the elevation and preservation of our race.

In New York City, the worst tenements, brothels and whisky shops were found on property owned by the richest church corporation in the United States. That powerful body, by reason of the wealth, high social standing, and political power of its members, did more to retard enlightened sanitation than any other single factor in the metropolis. Yet that same corporate body spends thousands upon thousands every year in the establishment of missions and in teaching the inhabitants of the slums the road to that higher life which they never can attain. What think you will be the history of the inhabitants of these districts and their descendants? Physical, mental and moral degeneracy can be the only result. The crowded factory, the sweat-shop, the lighted streets, and later on the hospital, the alms-house, the jail and the pauper's grave.

TUBERCULOSIS.

Koch, in demonstrating the cause of tuberculosis, made one of the greatest discoveries in the history of medicine. Of our seventy-five millions of population, it has been estimated by the statistician that eight to ten million will die from some form of this disease. The great white plague costs our nation three hundred and thirty millions of dollars per year in the lost labor of this vast army, in the money expended in caring for those who are unable to care for themselves and also those who are dependent upon them. Medical science has demonstrated that this disease is produced by a specific bacillus and that it is undoubtedly communicable, although its communicability is comparatively slight when proper precautionary measures are observed. It has also been demonstrated that tuberculosis is preventable, that it is not hereditary, that it is curable in its early stages, and that a large percentage of those fairly well advanced, can be successfully treated. It can be prevented by sanitation and its further communicability from one to another can be stopped by precautionary measures, which can be readily taught by physicians and by boards of health through leaflets and circulars given to the members of a household where such unfortunates are found.

Compulsory registration of tuberculosis by physicians is probably one of the most important methods of combating this disease. While physicians have been foremost in seeing the danger from this scourge, and have been most energetic in its prevention, and further extension, the profession, as a body, has not only been indifferent, but in many instances has earnestly opposed the action of boards of health in obtaining report of tuberculosis patients and have bitterly combated compulsory registration. Tuberculosis should be reported with the same care as small-pox, scarlatina, diphtheria and other contagious diseases. Boards of health cannot correct improper sanitation and carry out efficient means of disinfection without the co-operation and intelligent support of the entire profession. In every community, the physician should be, by nature of his calling, an active member of the board of health, and a thorough sanitarian. In New York City it has been estimated that in fifteen years the death rate has been reduced forty per cent by the efforts of the health authorities. In Boston, similar results have been obtained, by reason of the thorough information given by physicians and by careful methods of disinfection. Systematic inspections should be made of factories, work-shops, tenements and school-houses in order to improve plumbing, draining and ventilation and also to enforce cleanliness and to prevent over-crowding. Playgrounds for children should also be provided, especially in districts where the population is most dense, and parks for recreation and amusement. Physiology and hygiene, as now taught in many of the public schools will train the future citizens in the importance of fresh air and sanitation and a proper method of living. The gradual introduction of scientific gymnastics in our grammar schools, high schools and universities, will do much to improve our standard of physical development and to train the students in the importance of a sound body in the attainment of the highest degree of mental and manual skill. The youth of this country should be taught that sickness is not a visitation of God but that it arises in the

great majority of instances from purely preventable causes and that cleanliness and sanitation are far more efficacious in averting disaster than many prayers.

The patient and the members of the household should be carefully instructed by the physician in regard to the nature of this disease, and the health department should at once be informed of the presence of tuberculosis in order that a thorough inspection of the premises can be made and all violations of sanitary laws corrected. Printed leaflets or circulars giving full instructions as to the care of sputum, ventilation and cleanliness should at once be sent to the dwelling. The proper disinfection and disposition of the sputum and dejecta is of the first importance in preventing the further extension of infection to others; and printed directions will be received with more thought and consideration than mere verbal instruction. When death occurs, the tenement should be thoroughly cleansed, the wall-papers removed and the infected rooms thoroughly disinfected with formalin. Isolation and quarantine are extreme measures and unjustifiable, and would, in all probability, defeat such rational legislation as we may desire to obtain. Anti-expectoration ordinances, however, appeal to the public as being wise and proper and their adoption in many of our leading cities is a most important aid in preventing the further extension of this disease. In New York City, where the streets were swept dry, it was found that tuberculosis greatly increased among the laborers; whereas in Berlin, where the streets were sprinkled before being cleaned, the laborers remained healthy.

Teachers and pupils suffering from tuberculosis should be excluded from the public schools, and boards of health should be given power to see that such exclusion is enforced. It has been shown that a single tuberculous cow in a crowded dairy will infect an entire herd, and it is safe to say, that, in a crowded schoolroom, a tuberculous teacher or pupil will be a source of imminent danger to all those who come in close personal contact with such an one; and this will be especially true in the case of the rapidly growing child.

The busy physician too often considers that his duty has been performed when he has made a diagnosis and given proper instruction and advice to the patient; but it is certainly his duty to advise the members of the household of the danger to others and to give careful admonition in regard to the liability of others to contagion. One of my confreres had a patient suffering from advanced tuberculosis, and notwithstanding his careful instruction, a brother, who was a professional athlete, and in the best of physical condition, obstinately persisted in occupying the same room with his sick brother, and as a result died in six months from rapid consumption.

The most important public measures that have been recommended for the treatment of tuberculous patients have been:

1st. Dispensaries for out-patients, where instruction is given in regard to fresh air, diet, general sanitation, preventive measures and the administration of such remedies as are suited to the individual;

2nd. District nurses who care for such patients in their homes and give advice as to the disposition of sputum, the ventilation of rooms and the general care of the invalid;

3rd. Sanatoria for the care and cure of the hopeful cases;

4th. Hospitals for those who are considered incurable and have no means to provide care for themselves;

5th. A separate department for the care of the criminal who suffers from tuberculosis;

6th. A similar provision for the tuberculosis insane;

7th. The provision of farms and open air shops for patients who may recover by light work in the open air and who do not wish to be objects of public charity.

The different procedures have been used in this and other countries with success and much attention has been given by many of our profession to this important subject in order to arouse the general public in regard to the necessity of state aid. Preventive measures in tuberculosis would undoubtedly in a few years decidedly change our statistics; and it is fair to presume that if typhoid fever can be reduced by proper sanitation to one-tenth in a few years, similar results might be obtained in tuberculous diseases.

Those who are suffering from advanced tuberculosis should not be permitted to ride in crowded Pullmans and it should be the business of the railroad companies to provide a proper compartment for them in order to protect the traveling public.

BOVINE TUBERCULOSIS.

After carefully reading the bulletin of the Ohio Agricultural Experiment Station and the reports on bovine tuberculosis and public health by D. E. Salmon, D. V. M., Chief of the Bureau of Animal Industry, U. S. Department of Agriculture, the following definite conclusions are formed:

1st. "This disease is caused by the growth within the animal tissues of a vegetable organism, bacillus tuberculosis;"

2nd. "The bacterium of bovine tuberculosis has not been specifically differentiated from that producing tuberculosis in the human subject;"

3rd. The cultures from a human source as a rule are less virulent than the bovine. Cultures, however, have obtained, which have been proven to be equally virulent.

4th. General tuberculosis, miliary tuberculosis and local tuberculosis have been produced in cattle and other animals by the ingestion, subcutaneous and intravenous injections of cultures obtained from the human being. Similar results have been obtained by using human sputum and pieces of tubercular tissue.

5th. Two forms of the bacillus occur in man, namely the human and the bovine. These differ both microscopically and in their manner of growth, and are probably variations of the same bacillus. If they be distinct organisms, the presence of the bovine form can only be explained by contamination from a bovine source.

6th. When lower animals have been inoculated with tuberculous material taken from men and cattle, the tubercular lesions cannot be differentiated upon autopsy.

7th. Tuberculin, from a human source, has been used by the Bureau of Animal Industry, in testing tuberculosis in cattle, and it has invariably demonstrated the existence of the disease in infected herds.

8th. "Tuberculosis has been produced in man by inoculation with tuberculous material from cattle." Both local and general tuberculosis have been produced in this manner and the nature of the infection has been demonstrated by the microscope, by culture and by inoculation. Numerous cases attended with fatal results have been reported.

9th. "The development of tuberculosis in human subjects has followed in so many instances upon the use of meat or milk of tuberculous cattle that there is no room to doubt that the disease is transmitted from cattle to man in this manner."

Many cases have been reported where both veterinary and medical experts have believed that miliary, intestinal and general tuberculosis have been produced by the ingestion of milk from cattle proven to be tuberculous. Ollivier reported to the Paris Academy of Medicine an instance where twelve young ladies without a family history of this disease, developed symptoms of intestinal tuberculosis and five died. The cow supplying milk to this school died of tuberculosis of the intestines and udder. It has been claimed that the milk is a source of danger only when there is tuberculosis of the udder, but it has been proven that fifteen per cent of tuberculous cattle

produce infectious milk while only two per cent have tuberculosis of the udder.

That tuberculous milk may be a source of danger seems to have been demonstrated by the experiment of Nicolas and Descos who fed dogs with food filled with tubercle bacilli, and in three to four hours demonstrated their presence by staining and by inoculation in the receptaculum chyli and the thoracic duct. These animals were thoroughly examined and those with pre-existing tuberculosis carefully excluded.

10th. Careful statistical studies show that while there has been a large diminution in the general mortality from tubercular diseases, that, instead of a corresponding diminutfon of the mortality in children during the milk-consumption period, there has been a marked increase.

11th. That tuberculosis is a germ disease caused as surely by contagion or infection as are small-pox and measles, is confirmed not only by the innumerable cases in which it has spread through herds from single animals but also by the fact that many herds of cattle remain exempt from it and this fact demonstrates the possibility of the entire eradication of the disease.

12th. "In view of the experience of the other states, it would seem that the rational method of extirpating bovine tuberculosis lies not only in the wholesale and immediate testing of all cattle in the state and the slaughter of all reacting animals, but in such municipal action as will control the sale of both milk and meat within municipal limits."

13th. Tuberculous cattle are the subjects of mixed infection and sceptic fever. The flesh and milk of such animals is certainly unfit for food and should be strictly prohibited by law.

The inspection and supervision of dairies by boards of health are most important sanitary measures and will in time greatly reduce the large infant mortality of our cities. Veterinary experts have demonstrated time and again the accuracy of the tuberculin test in proving the existence of tuberculosis and we never can be sure of the purity of the milk supply until such tests are legally enforced. I myself have repeatedly seen cows which were sleek, fat and giving abundance of milk respond promptly to the test.

These animals have been pronounced by expert dairymen to be sound in every respect, but when killed showed marked lesions of the disease in the lungs, abdomen and udder. Numerous cases could be cited where healthy children, living in good, sanitary surroundings, and without a family history of tuberculosis, have developed the disease and the milk supply has been traced to dairies filled with tuberculous cattle. Admitting, for the sake of argument, that bovine tuberculosis cannot be transmitted to the human race, I think it would require much time to find a physician of education and standing who would recommend the milk of tuberculous animals as proper food for the growing infant. The intelligent dairyman will in time learn that it is to his advantage from a strictly business standpoint, to rid his herd of this disease, and that he will be amply repaid by the improved quality and quantity of its product.

THE HEYBURN BILL.

The Heyburn bill brought before Congress to prevent the adulteration of foods of all kinds, drugs and liquors, has received the unqualified support of the medical men throughout the whole United States. Nothing concerns more the future welfare of our nation than the establishment by the government of standards of purity for all the articles mentioned in this bill. It is impossible to produce a strong and vigorous race unless foods of every description are sound and wholesome, and the one who tampers with the quality of goods consumed by the people and is false in his weights and measures, should be punished with severity and dispatch. It is astonishing and astounding to read the reports in our various medical magazines showing how common and flagrant is the adulteration of drugs dispensed by the pharmacist. Such methods are certain to result in much harm and the loss of many valuable lives. The physician by watchfulness and care can certainly do much to correct this unfortunate condition. Let it be our concern to see that our patients receive our prescriptions as ordered and in case of willful adulteration make it our business to see that the offender is punished.

THE CRIMINAL ABORTIONIST.

The criminal abortionist and the vendor of abortive drugs who openly and shamelessly expose their own infamy in the daily prints of our great cities are surely descendants of the original plagues which were turned loose upon a suffering world. The one sending obscene publications, obscene letters and lottery advertisements through the mails can be punished by heavy fines and imprisonment or both.

A paper giving advertising space to an unconvicted felon, or to one who has already been convicted of this crime and has served his term in the state penitentiary, and who offers in print to commit other felonies at so much per felony, should be denied the service of the United States mails. An inspector of mails has said that the law is absolutely plain and clearly covers this class of cases and that he will at once take action and enforce the execution of the law.

PATENT MEDICINES.

Patent medicines and cure-alls are another source of evil and although it may be years before proper legislation can be obtained such laws as are observed in France would be a great boon. The ingredients of such nostrums should be printed upon the package sold and the mystery of the cure, which is its chief attraction to the innocent and ignorant would be exposed and failure would be the logical result. The public would not be beguiled into buying a sure specific for some incurable disease, which is known to be some simple remedy which might be purchased for a trifle at the nearest drug-shop.

SECRET PREPARATIONS.

Our STATE MEDICAL JOURNAL and all our county societies have boldly denounced the *Journal of the American Medical Association* and other medical journals whose pages are filled with advertisements of proprietary articles and secret preparations, which, too many of our medical men aid in foisting upon a trusting public. The trustees of the American Medical Association are acting in violation of the principles of medical ethics and have acted in opposition to the just and earnest protests of this state organization. When our leaders with names honored in the medical world, give space for a consideration to unscrupulous drug-houses, is it strange that many physicians prescribe combinations of drugs about which they know nothing and pour them into stomachs about which they know less, and then trust to kind Heaven to affect a cure? Our pharmacopeia is certainly ample for our needs, as it contains all remedies which have been scientifically analyzed by the chemist and clinically tried by the clinician; we can certainly duplicate anything of value which has been exploited as a special preparation in the simple terms of our dispensatory.

THE MEDICAL LAW.

Our present medical law in regard to the examination, qualification and licensing of physicians and surgeons has been endorsed by this association and it is through the zealous and unselfish action of its members that this law was finally passed and put in force. This law has done much to raise the medical standard of education, and it certainly redounds to our credit that we are endeavoring to attain to the highest degree of excellence and skill in the science and art of curing the ills of man. Be it said to our credit and honor that no one can truthfully say, that all our efforts in regard to legislation have not been for

the good of our fellow-man. As long as this is our aim, we shall enjoy the confidence and trust of the public, and when thoroughly united upon a given course of action, we can obtain any law we deem wise and proper.

THE STATE BOARD OF MEDICAL EXAMINERS.

The members of the State Board of Medical Examiners have been those who have placed the medical law in active operation and it is through their efforts that the law has become a law as well in fact as in theory. They are the judges who see that this enactment is enforced and that the objects of those who frame this decree are carried out. Unless the men upon this board are capable, active, energetic and fearless, our medical law will be ineffective and inoperative. This legislative act has been brought before the Supreme Court, and it has been decided that it is in accord with our State Constitution. The Board has endeavored to make its examinations as rigid and as severe as those in any state and to set a high standard for medical education in both theory and practice. They have acted boldly, fearlessly and without favor, and it is our duty and pleasure to congratulate them upon the able accomplishment of a most difficult and arduous task.

REGISTRATION OF NURSES.

The act brought before our Legislature providing for the registration of graduate and qualified nurses and to create a State Board of Examiners for the same has received the active co-operation of the medical profession. The raising of the standards for admission to our best training schools has no doubt increased the efficiency and skill of the nurse and will elevate nursing to the dignity of a profession and will call to our aid the best intellects and best trained minds. The time is near at hand when it will be contrary to law for us to place lives of our patients in the hands of unskilled and untrained nurses.

STATE LABORATORY.

The establishment of a state laboratory at Berkeley has been proposed and will in time doubtless become an accomplished fact. This laboratory would be at the service of the State Board of Health and also local boards of health as well as individual physicians who are unable, on account of the great expense of equipment and maintenance, to avail themselves of such facilities. In this way, and no other, can the widespread adulteration of foods, the sophistication of drugs and the use of dangerous preservatives be thoroughly exposed and punished. Such an institution need not be a great burden to the state, as much of the work is done by advanced medical students and recent graduates who eagerly seek such positions for the advantage of the special training in chemistry, bacteriology, pathology and sanitation.

VACCINATION.

The anti-vaccination bill which passed both houses and was finally vetoed by our Governor, is an evidence of what may be accomplished by misrepresentation, ignorance and enthusiasm. It is a pitiful and sad commentary upon the intelligence of our legislators who acted in direct opposition to our State Board of Health, the local boards of health, our county societies, and the best medical experts throughout the world. These have all said in substance that small-pox can be prevented and practically eliminated by vaccination and re-vaccination; and these agents alone can combat and destroy one of the greatest scourges which has cursed our race. The great Jenner, by his discovery, has saved more lives than the vast armies of Europe have destroyed, and has saved more wealth to her nations than has been wasted in needless wars. Let us therefore be thankful and praise God that our legislature has adjourned.

COUNTY SOCIETIES.

It has been proposed by many members of this association that the county societies should receive all members of the medical profession who are legally qualified to practice medicine. They say, "Take them all in, the good and bad alike, and if the bad are still bad, we have them where we can discipline them." We should not turn our medical societies into reformatories, but should see that they represent all that is good, honest and honorable in the profession and in this way only can we exert power and command the respect of the communities in which these associations exist. I do believe, however, that men who agree not to practice or support sectarian medicine should be received regardless of schools. This is an age of liberality, when all class distinctions and old-time differences should be things of the past. Let us endeavor to promote union and harmony and in the words of the immortal Lincoln, "With malice toward none, with charity for all," follow that God-like art of curing the ills of man which regards not race, color or creed. Let us be physicians in the broadest and most liberal sense and welcome to our ranks all those who love science for herself and knowledge for its possession. Let us follow in the path of Him who was called the Great Physician, and gave us the Golden Rule, which is the essence of all our medical ethics.

Superlative Nerve.

A number of comments from manufacturers on the announced plan of the Council of Pharmacy and Chemistry of the A. M. A., are published in the *Journal*. Among them we note the following from the Gardner-Barada Co.: Everything contained in the announcement and circular is unqualifiedly and absolutely endorsed. Every rule is conducive to good, and not one of these rules, even in its strictest interpretation, will harm any honest manufacturer. Our labels, etc., will be ordered to be changed as fast as the presses can print them.

And this from the concern that said its stuff contained "lithium methaminate," a chemical product of the imagination, and now says that the same stuff contains "lithium-comp with formaldehyde," whatever that may be, and is advertising in the pages of the *Journal A. M. A.* Evidently a lie was told either first or last, yet the *Journal* continues to "promote the use" of this concern's stuff!

Dr. Rupert Blue, who has had charge of the Marine Hospital Service of San Francisco, has been transferred to the Marine Hospital, Norfolk, Virginia. Dr. Blue left for that place on April 4th.

Portland Meeting of the A. M. A.

Portland is well supplied with hotel accommodations; but on account of the great number of people who will attend the Lewis and Clark Fair it would be well for all intending visitors to secure rooms in advance through the Committee of Arrangements. (K. A. G. Mackenzie, M. D., chairman, 506 Dekum Bldg., Portland, Ore.) The committee having this in hand expect to secure rooms sufficient to meet all requirements of our visitors and by an organized messenger service to be able to locate them promptly upon arrival. Rates will probably be a slight advance on ordinary charges, but not excessive in any case.

The following will give an approximate idea to those East of us of rates to Portland: Missouri River points (round trip), $45.00; Chicago (round trip), $56.50; St. Louis (round trip), $52.50; St. Paul and Minneapolis (round trip), $45.00. These rates are by "direct lines" to Portland. If the trip is one way (going or returning) by way of San Francisco, add $11.00 to the above rates. Corresponding reductions have been made from points east and south of Chicago. Time limit on tickets will be 90 days.

Arrangements have been made for side trips for those who may desire them, at reduced rates, to Alaska, Japan and the Hawaiian Islands.

SOME NOTES ON RECENT PROGRESS IN THE SURGERY OF THE EAR AND BRAIN.*

By A. BARKAN, M. D., San Francisco.

THE region of the temporal bone is a common ground for the general surgeon and the surgeon-aurist. To the first belongs the merit of having dealt with pyogenic diseases of the brain, including those of otitic origin on broad lines, whilst the latter has made of otology, not half a century ago one of the most neglected and ill-famed of medical branches, a thoroughly scientific department of medicine, based on intelligent interpretation of acoustics, of bacteriology and of fundamental surgical principles. No excuse is, therefore, needed if I take the liberty of bringing a few data before you tonight; data which tend to show that the understanding of the importance which purulent ear disease bears to life, is making fair headway. In the main this very informal communication embraces personal experiences during my attendance of the British Medical Association meeting, July last, in Oxford, and last year's International Congress of Ear Surgeons in Bordeaux. In Oxford Professor Macewen delivered the general oration on surgery. It contained observations on some respiratory and cardiac reflexes induced by the peripheral impressions of the pudic nerve, a communication of importance to the surgeon who operates in the region of the anus and the region inervated by the pudic nerve. In another part of the oration Macewen treated upon the choice of suitable material for ligatures and sutures and the requirements of the living tissue relative to them. This part of his address relating to catgut, though well known to many of us from the teaching of the master, whilst amongst us some years ago, will bear renewed study in detail. The address may be found in the *British Medical Journal*, July 30th, 1904.

The part of his address which I desire to bring to your special notice dealt with localization of brain abscess arising from primary pyogenic cranial lesions, the determination of abscess versus meningitis and the results achieved in dealing surgically with tubercular meningitis. Some of these remarks are contained in his book, and have been mentioned in his course of Lane Lectures; others were gathered from him personally during a short holiday trip I had the privilege of enjoying in his company.

"In the great majority of cases in which abscess has formed from foci on the exterior of the skull, the abscess is in direct contiguity with the infected structures. Taking the ear as primary focus, temporo-sphenoidal abscess will develop through the tegmen of the antrum or of the tympanic cavity; cerebellar abscess will develop from the region of the sigmoid. The paths followed are generally easily tracable. Access to the abscess is facilitated by extension of the aperture already made in the mastoid. A rather important point made by Macewen is that *abscess* of the brain does not occur by pyogenic organisms traveling by way of the internal auditory meatus, for the whole length of the internal auditory canal separates and in a way protects the brain from the focus of pus in the middle ear, while leptomeningitis is set up in the canal, spreads along the membranes which ensheath the nerve and over the basal membranes. Collections of purulent matter frequently found in the meshes of the pia and arachnoid produce occasionally *softening* and *ulceration* of the surface, *but not abscess of the brain.*"

The most important feature of this part of the lecture is contained in Macewen's remarks on tuberculosis of the middle ear extending to the brain. He has recently observed ten cases of tuberculosis of the middle ear *without perforation of the membrani-tympani*, and in the majority of cases without swelling over the mastoid. Five of these, because of extensive involvement of the basal ganglia and of the cerebellar fossa, could not be further dealt with after radical operation of the mastoid had been performed, and succumbed to turbercular meningitis after various periods; and some lingered for months. In five other cases intracranial operations were performed. As the meningitis was unilateral it was hoped to be still localized and to have spread by way of the tegmen. That hope was not realized in two cases, numbers 6 and 7 of the series, though the latter patient, 7th, improved after operation and resumed work and lived in fair condition for three years with two meningeal attacks of short duration. He died in the fourth attack of typical basal tubercular meningitis. In the other three cases which came under observation at an earlier stage of the disease, the disease was confined to the basal membrane and lateral aspects of the temporo-sphenoid lobe and were dealt with successfully. The patients not only recovered from the operation but regained strength and vigor. One still holds a foremost place in a large public school.

Macewen advises to carefully watch these cases of tuberculosis of the middle ear, taking their course often insidiously, causing no rupture of the membrani-tympani and hardly any subjective symptoms. The possibility of curing favorable cases of limited and early detected tubercular meningitis as elicited by Macewen's statement opens up a new therapeutic possibility and ought to keep us ever on the alert. Tuberculosis of the middle ear often passes into the sigmoid sinus and disseminates disease through other parts of the body—lungs, epiphyses of bones and viscera.

Allow me now to supplement these statements by some personal remarks made by Macewen to his traveling companions from Paris to Bordeaux, as taken from my note book. In part a repetition of his oration in Oxford.

Brain abscess nearly always develops by contact through an erosion at the base of the brain, not by pyemia. Meningitis will travel along the sheath of nerves in the internal meatus, but abscess does not form in that way, the cerebellum and medulla being protected by the length of the internal meatus.

Remarks on Thrombosis.— Primary thrombosis in the jugular bulb is very rare. Where thrombosis of the sinus occurs it is generally found in the knee. Open the sinus, clean thoroughly, follow in either direction if possible, clear out all of the thrombus. The thrombus is always septic if caused by pyogenic ear disease, and bound to soften *even if hard at first; then* tie the internal jugular. Always attend to the sinus first, wash out carefully, avoid pressure, fold in the walls of the sinus, put boric-iodoform powder into the open sinus, sometimes rub in very carefully a few drops of pure carbolic acid until it shows white color; but one can do as well, and perhaps a little safer, with 1-20 carbolic solution, drying it off carefully. Again he puts weight on *tying the jugular vein only when thrombus cannot be cleaned out from above.* After tying he has a few times cut out pieces of the jugular, but as a rule he satisfies himself with opening the jugular and filling it with boric-iodoform powder.

Propagation of pyogenic matter through cerebral veins and formation of abscess in remote parts of the brain does not occur. Macewen always follows the pyogenic tract *from the ear* into the brain (or from the sinus into the cerebellum), instead of trephining over the ear, though a counter opening may sometimes be required. The surgical proceeding in tubercular meningitis of otitic origin *consists in tying the vessels and cutting out the diseased membrane.* Again and again he called attention to the fact that the trouble often occurs without any objective symptoms, just a little sensitiveness to pressure, though, of course, meningeal symptoms may be present.

Statement referring to the Bordeaux International Congress of Ear Surgeons.—Of the several and general reports made at the Seventh International Congress of Otology in Bordeaux, the one on diagnosis and treatment of labyrinthian suppuration (Brieger, Von Stein and Dundas Grant) is of general interest. The labyrinth may be affected in each form of acute and chronic otitis media purulenta. It generally follows the type of the primary middle ear trouble, i. e., the same process may take place in the labyrinth as

*Communicated to Society of Eye, Ear and Throat Surgeons and Cooper Medical College Science Club in San Francisco.

in the middle ear during scarlatina otitis; cholsteotoma also invades the labyrinth as it does the middle ear.

Tubercular meningitis does not always spread to the labyrinth. If the vestibule becomes affected hearing may be preserved for some time. But in the progressive otorrhea after operative opening of the vestibule, complete and lasting deafness generally results. Dizziness in different degrees is always present.

Various forms of nystagmus occur in lesions of the horizontal canal. Lumbar puncture may temporarily improve both dizziness and nystagmus. In most cases, even when the complex of characteristic symptoms is present, diagnosis is rendered possible only by exclusion; as, for example, if the labyrinthian symptoms do not pass away after radical operation on the mastoid, or if they first make their appearance after the operation. The sudden appearance of these symptoms in acute otorrhea renders the diagnosis much easier.

After radical operation the diagnosis is sometimes facilitated by the presence of fistulas, though discoloration of the semicircular canals does not always indicate the presence of pus. After opening the labyrinth the presence of pus is not so much indicated by the scanty amount of pus as from the presence of granulations. Purulent disease of the labyrinth may heal spontaneously, the cavities being filled with connective tissue and bone. The perilymphatic space and the arachnoidean space may be in direct communication without purulent meningitis necessarily resulting from labyrinthian affection, as the pia and arachnoid are quite resistant to purulent infection.

Tubercular labyrinthitis is amenable to partial or complete cure. As purulent labyrinthitis does not always cause purulent meningitis, so tubercular labyrinthitis does not always cause tubercular meningitis. Indications for opening the diseased labyrinth are not absolutely clear; more experience is needed.

Technique of Opening of Labyrinth.—Transform the hidden labyrinth empyema into an open suppurating cavity. The opening of the labyrinth must allow a comfortable removal of sequestra and cholesteatoma. The opening is generally made first through the horizontal canal; if in doing so vestibular suppuration is diagnosed, open the vestibule more extensively by excision of the stapes and enlarge the vestibular window. The opening of the semicircular canal alone is not sufficient to effectually drain the labyrinth into the middle ear. If labyrinthian symptoms still persist after the opening and if the functional examination shows more or less complete destruction in the cochlea, this must be opened by way of the promontory.

In cases where there is a deep extra-dural abscess present in the posterior wall of the petrous portion of the temporal bone and an abscess of the cerebellum, if their labyrinthian origin is recognized during the operation, the proper procedure is to open the vestibule from the rear, having removed the superior and inferior semicircular canals.

One must be careful not to injure the superior petrosal sinus and the jugular bulb in case the latter is situated high. One may use the gauge or the burr. Epinephrin proves very useful in reconnoitering the condition in the labyrinth wall, especially in the region of the fenestra. The post-operative treatment is the same as in radical operation. Light tamponing may be resorted to to keep the labyrinth cavity open if drainage be necessary.

Effects of the Operation.—Healing may be complete if the affection of the arachnoid is capable of retrogression. Occasionally one will get but a temporary relief of symptoms. Where healing is complete the trouble with equilibrium passes away slowly; later than the nystagmus. The hearing is lost either immediately after opening of the labyrinth or later.

Another report was given by Knapp on "How to Open and Care for an Abscess of the Cerebrum of Otitic Origin." Two ways to open: 1. Surgical way by trephine through the skull; and 2. The aurist's way, following the pyogenic path from the ear (also Macewen's). To expose the cerebellum, cut along the posterior margin of the mastoid process up the knee of the sigmoid and prolong in the direction of the lateral sinus. Evacuate the pus completely; when the opening is made large enough pus will find its way out. A very useful instrument for examining the walls of the cavity is the encephaloscope of Whiting of New York. It is similar in shape and appearance to the aural speculum. No gauze or tampon is necessary if the opening gaps well. Cerebral hernia is apt to be encountered in the after treatment of these cases. If such occur, enlarge the original opening or make another in the temporal bone and incise any secondary abscess present.

The discussion was opened by Sir William Macewen, who mentioned first the old jocular saying of Syme, that there exist two kinds of aural disease—one treated by the aurist and not cured, and the other treated by the surgeon and cured. This saying, Macewen thought, is becoming untenable in the light of the work of aurists in the field of aural surgery. This applies particularly to the results of the treatment of endocranial complications. One of the reasons why operations for cerebral abscess often fail *is the overlooking of the tract which unites the cerebral abscess and the primary focus of pus in the ears;* beside opening the abscess and eliminating the primary focus, one must also be certain to *eliminate the tract through which the disease has extended.* Do this incompletely and secondary abscess will form. To cite Macewen's words literally from my note book, "Take away either or both foci and leave a communicating tract and the result will be a *secondary* abscess; all communicating parts must be removed. We can cause mischief by interfering with the brain too much. Go into the brain directly. *Save all soldering adhesions* which protect the area beyond abscess. If none be present *make* adhesions; press carbolic acid 1:20 with tampon against the dura for 5 to 6 hours. Wait 24 hours if possible before entering from the ear into the brain. The wound is thus rendered asceptic." In 50 cases of abscess of the brain treated by Macewen, no difficulty was experienced with chloroform; it is much better than ether. In cases of large cerebellar abscess there may be difficulty. If the breathing stops, commence artificial respiration. Go down into the abscess at once without a general anesthetic. With regard to drainage he says: *"Do not drain;* washing out the cavity is dangerous, if you don't know how to wash it out. Be sure of free exit. Make free an opening into interior; take away sloughs; the endoscope will not help; the brain will fill up. Avoid irritation by drainage tube; it may be thrown by pulsation against the walls of the brain. If drain you must, put in a bit of gauze. Take care of the mastoid vein if operating near the sinus; air may be admitted, as in a case of cerebellar abscess diagnosed and operated upon, death occuring during the operation. Autopsy showed the coronary arteries filled with air."

LERMOYEZ'S CONTRIBUTION TO SURGICAL TREATMENT OF ACUTE OTITIC MENINGITIS.

The communication which Professor Lermoyez made at the International Ear Congress in Bordeaux last summer regarding two cases of acute purulent meningitis secondary to otorrhea, cured by lumbar punctures, is contained in extenso in *"La Presse Medicale"* of the 22d of October, 1904; it is a very interesting article of which I desire to give you an epitome. In the ear, as well as around the nose, the bones are full of cavities. Mastoid cells, frontal, ethmoidal, sphenoidal sinus may contain pus which can easily find its way to the meningi, as do the streptococci from the fallopian tubes to the peritoneum. As peri-

tonitis is generally engendered by the uterus so is meningitis generally engendered by the ear. Meningitis remained, up to a few years ago, the only complication of otitic disease which was generally recognized to be incurable. This is not the case any more. It would appear that nothing short of the beginning of the death agony should keep the surgeon from attempting to produce a cure. Again it is Macewen who has first opened and drained a case of suppurative leptomeningitis, curing the patient. The patients since then cured, eliminating cases of serous meningitis, are six or seven in number. Lermoyez adds two well observed cases to the others. In one, a young girl of 19 years, presented on the 22d of January, 1902, the following condition: Otorrhea on the left side for one year. There were present Kernig's symptom, stiffness of the neck, severe headache, vomiting and intense fever. Lumbar puncture was made. Under strong pressure a liquid containing 58 per hundred of lymphocytes and 40 per hundred of polynuclears was obtained. Radical mastoid operation was performed with complementary large craniotomy without encroaching upon the dura which, though covered with granulations, showed no fistula. The next day, temperature normal; two days after, Kernig's symptom disappeared; six days afterward a new lumbar puncture showed 99 per hundred of lymphocytes and 1 per hundred of polynuclears. One month from the date of entering the hospital the patient was discharged. Half a year later a small labyrinthian sequestrum was removed. Perfect healing subsequently. The other case was in a young girl of 18 with otorrhea since the age of 7. A subacute attack of mastoiditis following a cold in November, 1903. The radical operation was performed and the dura mater found intact. No other clinical symptoms of an encephalic order. All went apparently well for ten days afterwards, when an intense cephalalgia with vomiting occurred; temperature very high—39.2 degrees. Next morning lumbar puncture was made and an almost purulent liquid obtained, showing intense polynucleosis. It was decided to open and drain the meningi, as everything necessary had been done in the way of cleaning out the ear. The dura was exposed to a fairly large extent, largely excised and several punctures (clear in character) were made into the temporal lobe. Caries of the labyrinth was also discovered, showing the labyrinth again to be the bridge between the otitis and meningitis. The next day improvement commenced and kept up steadily, with two renewed lumbar punctures made in intervals of a few days. The recovery was not quite smooth, but about one and one-half months after the outbreak of the disease, all symptoms had disappeared. Here, also, later on, a labyrinthian sequestrum was removed. Lermoyez remarks, "It is fair to admit that considering the intensity of the symptoms in these two cases, they (the patients) would have succumbed without intervention. Had they fallen sick five years ago they would have offered us simply two ordinary autopsy cases. Instead of that they have recovered and taken up their life work; a success well worth rejoicing over." In his clear, systematic manner he recommends to observe four rules in dealing with these cases. First, to empty very extensively the petrous portion of the temporal bone; that is, to make the radical mastoid operation, exposing the dura without incising it. In case of doubt as to the presence of meningitis, lumbar puncture may be used as a diagnostic means. At the same time, at this stage is may be necessary to make an exploratory craniotomy. That has for its purpose, to explore the endo-cranium and to evacuate any extra-dural abscess which may be overlooked by the coexisting meningitis. Then the craniotomy serves the purpose of "decompression," i. e., relieving any existing pressure. Except the very rare cases where abscess may be together with meningitis and where the abscess must at once be opened; in clean cases of this kind the dura should not be opened the same day. Same cases have been observed where the radical operation, together with the craniotomy, are sufficient to effect cure. The second rule Lermoyez puts down is to incise the dura in order to penetrate into the subarachnoid space. This serious step will only be taken in two instances; first, if the primary procedure has been useless; second, when meningitis breaks out in a patient who has already undergone radical operation and craniotomy, as in his own second case. As a rule, 48 hours should elapse between carrying out the first and the second rule. At this time, then, two things are to be done. A large crucial incision of the dura and explorative puncture of the temporal lobe, in themselves inoffensive if done properly. The purpose of this procedure being to empty the lateral ventricles in case they should be distended and open up any latent cerebral abscess. The third rule is to make a repeated lumbar puncture. The liquid must be abundantly removed at least 15 c. c. m. at once and must be frequently repeated. Fourth step: "Be careful of the labyrinth." The labyrinth is the most frequent route along which the infection travels from the ear to the meningi; hence caries of the labyrinth is a frequent complication of otitic meningitis, as shown in the two cases which Lermoyez records. It is better, then, to act as he has; to abstain from trephining the labyrinth even if it shows necrosis in the depth of the wound and to await its spontaneous elimination and natural cure.

Lermoyez's article, clear cut and important in itself, brings forward an almost entirely new chapter of otitic and cerebral therapeutics, and will require time, research and experience to put it on a solid basis.

THE USE OF BENZOYLVINYL-DIACETONE-ALKAMINE (BETA-EUCAIN) LACTATE IN EYE, EAR, NOSE AND THROAT WORK.*

By H. BERT. ELLIS, M. D., Los Angeles.

WITHIN a comparatively short time there has been placed upon the market an exceedingly soluble salt of eucain, beta-eucain lactate. I have used this local anesthetic exclusively for the past three or four months, and with general satisfaction. Some eight or nine years ago I had two or three patients collapse from the local application of comparatively weak solutions of cocain hydrochlorat. One of the patients came so close to the border land of the great unknown that I was thoroughly frightened, and since that time I have not used cocain in any of my nose and throat work.

About nine years ago alpha-eucain was placed upon the market, and I adopted its use. Since then I have used it, or beta-eucain hydrochlorat, exclusively, and during these nine years I have seen no systemic effects due to their administration, and have never heard of or seen anything approaching a "eucain habit."

Cocain is freely soluble, anesthetises mucous membranes quickly and thoroughly, but causes an ischemia and shrinking of the mucous membrane. None of the eucain preparations produce either the shrinkage or ischemia, but they do give results in the way of local anesthesia; and they are only to a moderate degree toxic; the alpha in particular and the beta to a moderate extent, congest mucous membranes.

The chief difficulty with the alpha- and beta-eucain preparations is, however, that they are only sparingly soluble in water at a temperature of 60° to 90°, beta-eucain being 3½ per cent soluble and alpha about 4 per cent. With solutions of these strengths it is sometimes necessary to use a considerable quantity, frequently repeated over a period of 15 to 30 minutes to produce anything like a satisfactory anesthesia for nose and throat work. Whenever in such work it is desirable to shrink the tissues and make them blood-

*Read before the Los Angeles Eye, Ear, Nose and Throat Society, February, 1905.

less, it is only necessary after using a solution of the eucain salts to use a solution of epinephrin, and this solution, in fact, adds to the analgesic effect of the eucain.

My experience with solutions of eucain in ophthalmic work was not at all satisfactory. The installations of these solutions into the conjunctival sac produced both pain and hyperemia, the pain usually quickly subsided, but the hyperemia sometimes remained for hours. These have been common experiences, and led the manufacturers to seek a more soluble and less irritating salt of beta-eucain, and they have succeeded. The new salt, the lactate of beta-eucain, I have been experimenting with for the past three or four months. It is a white hydroscopic powder which is freely soluble in water to about 25 per cent, and in alcohol to 13 per cent. It is slightly alkaline and contains a trifle less eucain than the beta-eucain hydrochlorat, 119 parts of the former equaling 100 of the latter. The solution is intensely bitter to the taste, and when applied to the mucous membrane of the nose or throat, it produces a sharp burning sensation, which quickly passes away, without any hyperemia, anemia or shrinkage, and leaves only an anesthetized area.

On account of the fact that the lactate contains slightly less eucain than the hydrochlorat, stronger solutions should be used, for nose and throat work 10 to 15 per cent, and for eye work 2 to 5 per cent. I have been using 12 per cent solutions of the lactate to anesthetize the mucous membrane in making diagnoses of nose, throat and ear troubles. They do not disturb the circulation or shrink the tissues so that you may see them and feel them with your probe while in their natural condition. For removing portions of the turbinated bodies I use a tampon of cotton saturated with 12 per cent solution of the lactate, allow it to remain 5 minutes, replace it with another, allow it to remain 5 minutes; when, ordinarily, the parts are ready for operation.

When spurs of the septum are to be removed, after using the lactate as above, put in a tampon saturated in 1-1000 epinephrin solution, so that the tissues will be shrunken as much as possible. Epinephrin may be used in combination with the lactate when operating on the middle turbinated bodies or the ethymoidal cells.

A 5 per cent solution of the lactate of beta-eucain, when dropped into the conjunctival sac, causes a more decided smarting than does a 4 per cent solution of cocain, but it causes neither hyperemia nor anemia, and it has the decided advantage of cocain in that it in no way disturbs vision, having neither cycloplegic nor mydriatic action, while the anesthetic effect is excellent and quite equal to that produced by a 4 or 5 per cent solution of cocain, although you have to wait a little longer for the anesthesia, and it produces no lesion of the cornea.

For infiltration anesthesia the following prescription will produce anesthesia in the course of 30 minutes, which will last 3 or 4 hours, and that too without any depressing effects, even though twice the quantity may have been injected:

℞	Lactate of beta-eucain	gr. 4
	Sodium chloride C. P.	gr. 12
	Sol. epinephrin (1-1000)	m 10
	Distilled water	℥ 3½
M	Inject ½ for ordinary operation.	

When we consider the facts narrated before, why should we longer use cocain solutions in operations upon the eye, nose or throat?

1. We have all seen the stimulating effects of cocain; some of us have seen the syncopy and other particularly distressing symptoms following its use in patients on whom we have used the same strength solution, and in as great a quantity, on previous occasions; some have had the misfortune to have patients die from the effect of weak solutions applied to the urethra or nasal mucous membrane.

2. We all know by reading, and probably most of us by personal knowledge, of the frightful "cocain habit," and this habit is altogether too frequently the result of using cocain solutions in the nose for operations and colds in the head.

3. Cocain produces temporary ischemia and shrinkage of mucous tissue, which many claim favors secondary hemorrhage after operations.

4. There are many occasions when these conditions are not desirable; when they are wished for they may be produced to a greater extent by other and less harmful means.

5. Cocain, when used in the conjunctival sac, dilates the pupil to a greater or less extent and interferes more or less with vision, in addition to its anesthetic, ischemic and shrinking qualities, besides sometimes causing corneal lesions.

1. Beta-eucain, hydrochlorat and beta-eucain lactate in particular, are only moderately toxic, the hydrochlorat being 3½ times less toxic than cocain, and they have but very slight systemic effects. I have not noted in medical literature a single death, or, in fact, any serious or alarming symptoms following and resulting from their use, as they do not affect the heart.

2. There have been no cases reported of a "eucain habit" having been contracted by any one on whom the solutions have been used, although eucain has been in use nearly ten years.

3. Beta-eucain lactate neither produces hyperemia nor ischemia, and does not shrink the tissues; so of itself it is not likely to favor secondary hemorrhage.

4. When a bloodless and shrunken condition of a local mucous membrane is desirable it may be obtained by the local application of a solution of epinephrin by itself or in combination with a solution of the lactate of beta-eucain.

5. When a 5 per cent solution of beta-eucain lactate is dropped into the conjunctival sac, after the first temporary smarting is over (and this is considerably greater than that following the instillation of a 4 or 5 per cent solution of cocain), you have only an anesthetic effect. The pupil is not enlarged, there is no interference with accommodation, the conjunctiva is neither congested nor blanched, none of the tissues are contracted and the cornea remains intact.

Beta-eucain lactate solutions are permanent, undergoing no change by boiling, so that no difficulty is encountered in keeping them sterile.

A CASE OF PRIMARY CARCINOMA OF THE LUNG.*

By HENRY HERBERT, M. D., Los Angeles.

Pathological report by E. L. Leonard, M. D., Los Angeles.

THE history of the case is, in brief, as follows: Mrs. H., 53 years of age, German, married 24 years, had 5 children. Father died of unknown cause, mother from cancer of the stomach at the age of 59. Her parents had 11 children; one a sister, died from cancer, a brother from phthisis, another brother died from cause unknown to her. Husband and children are living and healthy. Menstruation ceased at 50. Previous to her present illness patient was suffering for many years from bronchitis and laryngitis, as she claims.

November 22, 1903. Patient became suddenly sick with a so-called "cold," and suffered a great deal of pain in the left side of the chest; one month later hemoptysis set in, pain ceased, only to reappear in January, 1904, with fever and recurrent hemorrhages. At that stage of the disease the case was diagnosed as phthisis, and the patient was sent to California, and thereafter was in the care of Dr. C. Dietsch, of Los Angeles.

In March, 1904, Dr. Dietsch found on examination an absolute dullness over the upper lobe of the left lung; patient had fever, slight dyspnea, some pain in left side of thorax, no hemoptysis. Gradually cough and expectoration increased, patient complained of severe pain in left scapular and interscapular region. Bacteriological examination of sputum in April did not reveal the presence of tubercle bacilli, or of elastic fibres; fever and dyspnea much decreased, but pain became more severe.

Dr. Dietsch suspecting at that time a syphilitic infiltration of the lung, employed mercury and potassium iodid from April 10th to 25th, but without any result or benefit.

*Read before the Los Angeles County Medical Association, December, 1904.

During May and June there was continuous expectoration of blood, the sputum having a peculiar gelatinous, viscid consistency, dark red, currant or raspberry jelly-like with a rather violet or bluish hue. Dr. Dietsch suspecting a malignant tumor called me in consultation, and June 13th careful examination revealed the following condition:

Status presens: Objective symptoms. Patient was confined to bed, but able to walk around more or less; of small stature with small frame, dark complexion, anemic, with brownish or yellowish tint of skin, cheeks slightly flushed, morbid expression of face, greatly emaciated muscles atrophic, mucous membranes anemic, fingers slightly club-shaped, nails cyanotic and curved. Thorax in dimensions and shape of normal appearance, also both mammæ, no retractions or grooves visible. Respiratory movement of left side markedly retarded, in upper region not present at all. Above sternal end of left clavicula, just above the jugular fossa, one large cervical gland to be felt; another one also in left axilla.

Pulse 96. Respiration 15. Temperature normal. Palpation and percussion of right lung anteriorly and in right axilla gave normal resonance. In left lung anteriorly, dullness from apex down to arch of ribs, also in axilla; apex and infraclavicular space absolutely dull or flat, whereas resonance below was greatly impaired; slight respiratory movement of lung was noticed anteriorly and in axilla.

In left lung, posterior, absolute dullness from apex down to about fourth or fifth dorsal vertebra, sound improving downward with very slight respiratory movement of lung. Right side showed normal condition. Tactile fremitus absent on left side.

Auscultation of right lung anterior with the exception of a few fine crepitant râles at the base, showed normal vesicular breathing. In left lung anteriorly and in axilla there was diminished vesicular breathing throughout, semibronchial and in some parts bronchial breathing was present in apex and first interspace; in upper region no râles whatever; very few in lower lobe. Posteriorly, the same type of breathing was noticed down to the middle of the scapula, which improved below, many dry diffuse râles were heard in the lower lobe. Vocal fremitus and whisper-voice on left side not increased, rather diminished. In right lung, posterior, a few crepitant râles at the base, otherwise normal. The 5th dorsal vertebra painful on pressure. Abdomen: Walls flabby, otherwise normal.

Subjective symptoms. Intense radiating pain in upper region of left thorax, in shoulder, axilla and in arm down to elbow region; pain on pressure or even touch in supra-scapular region and axilla.

Exploratory puncture between 4th and 5th rib posteriorly did not reveal fluid. Microscopical examination of sputum as regards tubercle bacilli, or carcinoma particles proved negative.

From the foregoing history of the case and symptoms conclusion was reached: The occurrence of cancer in the family, the age of the patient, the unusual course of disease, its insidious development, the rather cachectic and not phthisical appearance, the presence of enlarged glands, the characteristic sputum, the intense dullness with absence of increased vocal fremitus and whisper-voice; the absence of fever, rigidity of chest walls, the *slow* respiration, the exclusion of syphilis and encapsulated empyema, the intense radiating pain, warranted fully the diagnosis of carcinoma of the lung.

The subsequent history, the X-ray picture, taken by Dr. A. Soiland, verified only the diagnosis; and, I may add that some time previous to her death there was noticed a distinct bulging upward of the left apex, a fact which alone speaks for neoplasm and against any other pulmonary disease.

Death occurred September 11, 1904, the disease thus lasting probably 10 to 15 months.

Autopsy Report, by E. L. Leonard, M. D.—The body was that of a small, somewhat emaciated woman about sixty years old. Heart was small and somewhat flabby, valves normal. The left lung was firmly adherent to the parietal pleura by dense adhesions. In the supraclavicular fossa a hard tumor mass was seen filling the fossa. This could be distinctly felt by palpation. It was firmly adherent to the first and second ribs posteriorly and to the clavicle anteriorly. The adhesions were broken away with difficulty, and in places the lung tissue was torn into. Both upper and lower lobes were completely consolidated, and no normal lung tissue was visible. On section the surface appeared gray in color and was very soft and friable. Large areas showed a hemorrhagic condition, while other areas showed consolidation resembling gray hepatization. In the right lung no pleura adhesions were present and a large part of the lung tissue was crepitant. Many hard nodular masses were felt varying in size from ¼ to 1 inch in diameter, of a grayish white color.

The liver showed a fatty infiltration with cloudy swelling. No metastases could be discovered. The pylorus and mucous membrane of the stomach was normal and the intestinal mucosa showed no evidence of metastases. No enlarged mesenteric glands could be found.

The kidneys were of normal consistency and the striations normal. Two very small white nodules were found in the left kidney about ⅛ inch in diameter and situated on the periphery of the organ. No nodules were found on the right kidney.

The uterus and ovaries were somewhat atrophic. No tumor could be discovered. The cervix and uterine mucosa were normal. Both ovaries contained a few cysts and were atrophic, otherwise normal in appearance.

The histological findings showed a carcinoma of the lung of the cylindrical cell variety. In the less cellular portions of the tumor in the left lung the alveolar structure of the specimen is well marked, the air vesicles lined with atypical proliferating cells, which in some areas filled the lumen of the alveolus.

The metastatic tumors in the right lung were of the same cylindrical cell variety. The liver showed cloudy swelling and slightly fatty infiltration, but otherwise was normal.

The small nodules on the left kidney proved to be metastatic growths of the same general character as the original tumor in the left lung.

Pathological Diagnosis.—Primary cylindrical cell carcinoma of the left lung with metastases in the right lung and left kidney.

To illustrate the rarity of this disease, I may cite that Reinhard, according to Loomis *(Med. Rec.*, Aug. 1895*)* found only 27 cases in the literature of this country and Europe; of those, 18 were in the right, 9 in the left lung. One year later Dr. Wolf has published a record of 31 cases of primary carcinoma of the lungs in the Dresden City Hospital from 1885 to 1895. The percentage of the death rate according to his statistics was 0.428 (*Med. Rec.*, May, 1896).

Benda gives in the latest issue of the *Zeitschrift für Krebsforschung* the death rate due to cancer of lung as 4:1000, or 4 per cent of all cancer deaths. In 1900 this proportion of 4:1000 rose to 12:1000, and I believe this increase is rather due to improved diagnostic means than to an increase of the disease.

The diagnostic value of the sputum is very problematic, although most of the old and even new text books lay great stress upon its typical character. Wolf found cancer particles in the sputum only once in 31 cases, and Dr. Betschard (*Med. Rec.*, May, 1896) claims that only one case has been recorded of a diagnosis of cancer of the lungs by the sputum.

To Grunsky—Verb Active.

Years ago one Captain Boycott, an Irish landlord, was ostracized by the land league, so that it became impossible for him to buy from, sell to, or to have any dealings whatever with his neighbors. Captain Boycott's name is now a legitimate English verb (to boycott); and may, we believe, be found in recent dictionaries.

Those who have read Dr. C. A. L. Reed's damning indictment of the Panama Canal Commission, "more especially Mr. Grunsky," in the *Journal of the American Medical Association* for March 11th, will realize the appropriateness of the perpetuation of Mr. Grunsky's name in a manner similar to that which overtook Captain Boycott's, to wit: To grunsky, *v. a.*, to obstruct with petty, and insensate officiousness; to harass competent officials with puerile, vexatious, and impracticable restrictions, thus rendering their work alike nugatory and costly.—*St. Louis Med. Review.*

Dr. Luther M. Leisenring of Placerville, was married to Miss Ethel G. Wilcox on April 26th at Omaha.

MINUTES OF THE THIRTY-FIFTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Riverside, April 18, 19, 20, 1905.

The session just held was one which will long be remembered by those who attended it. The registration was the largest recorded for a number of years, 230 having signed the register. The physicians of Riverside County Society had made excellent arrangements in advance, and their zeal was manifested not only in the satisfactory manner in which meeting places were provided, but also in securing the comfort and entertainment of those in attendance.

The full minutes of the meeting are here published as taken from the notes of the Secretary and Assistant Secretaries. It is to be noted that the business of the Society was all transacted in two sessions of the House of Delegates, and that these sessions were not long nor arduous.

The Board of Examiners, reporting through three members present, showed very good work done, and it was manifest from the spontaneous applause, as well as from the result of the election, that an overwhelming majority of the members of the Society were well satisfied with the work of the board.

SCIENTIFIC SESSIONS.

Tuesday, April 18th.

The first general session was called to order at 10:20 A. M. by Dr. Frank Adams, the President. Dr. W. W. Roblee, President of the Riverside County Society, delivered an address of welcome, and in a hearty manner offered all the courtesies of Riverside to the members in attendance.

Without further preface, the scientific work began and the Symposium on "Typhoid Fever" was opened by Dr. C. M. Cooper, who discussed the Diagnosis.

Dr. E. W. Twitchell not being present, his paper was passed for the time, and the paper of Dr. F. C. E. Mattison, on "Immediate Surgery, or that Necessitated by Perforation," was read.

Discussion on this paper was opened by Dr. Claire W. Murphy, of Los Angeles, who went more into the details of the symptoms of perforation and the conditions which maintain at the time. Pain, rigidity, tenderness, shock and increased pulse rate should be diagnostic; better to operate when there is no perforation than to fail to do so when there is perforation. Rapidity is of the greatest importance in operating for the repair of perforation.

"The Treatment," by Dr. Ray L. Wilbur, was read by the author.

Dr. P. C. H. Pahl read a short paper on the remote effects and surgery of bones as a complication of typhoid fever.

Dr. Wm. Fitch Cheney, in general discussion of the subject, cited some very interesting cases. In one patient the symptoms were quite diagnostic of perforation and the patient was subjected to operation, but no perforation was found. He emphatically endorsed the statement of Dr. Wilbur that no drugs were of any particular value, a good nurse, good milk and good water, are the essential things in the treatment.

Dr. W. E. Bates presented a short additional discussion of the major points in the treatment, and laid particular stress upon the details which are vitally essential.

Dr. S. J. Hunkin announced that there was a slight error in the title of his paper as given in the program; his subject was "Typhoid Involvement of the Hip Joint."

The Chairman of the Committee on Arrangements made an announcement in regard to the entertainment features that had been arranged and particularly to the entertainment of the ladies.

Dr. Geo. B. Rowell then read a paper on "The Accessory Treatment."

The general discussion being called for, Dr. C. G. Kenyon said that he was particularly pleased with the moderate and conservative treatment recommended. He referred to the uselessness of attempting to find a specific remedy for typhoid fever, and spoke of the harm being done by using secret and proprietary remedies and by mentioning them before a Society meeting.

Dr. Ray L. Wilbur said that he had noted involvement of the elbow joint

Dr. Lockwood said the mortality was large and many deaths were due to perforation; it is difficult to explain why so few operations are performed.

Dr. Emmet Rixford mentioned four cases in which perforation had occurred; the patients were not operated on within 24 hours and all died. Early diagnosis is essential.

Dr. R. F. Rooney referred to the value of the nurse and thought no disease required a good nurse more than typhoid. If the physician depends on secret remedies, he will be unsuccessful. He had seen two patients who died, he thought, from phenacetin.

Dr. W. J. G. Dawson said the papers showed that the treatment today was the same as that of 37 years ago; diet and good nursing are the essential things.

Dr. F. C. E. Mattison referred to operations, some reports showing over 40% of recoveries, which is most encouraging. Osler says 33 1-3% of deaths from typhoid are due to perforation. We should make the diagnosis early and then operate.

Dr. Geo. H. Evans said he felt sure the mortality rate in California and in family practice, is very low—much lower than in the East.

Dr. Geo. Ivancovich thought farinaceous foods mixed with milk and properly prepared, very valuable.

Dr. Wilbur said he believed in operation if sure of perforation, but pain is an uncertain and unreliable symptom. We generally find pain present, and also many other symptoms of perforation. Manipulation may cause an ulcer to perforate. Perforation may often be due to surgeon's examination.

Dr. J. Rosenstirn reported a case of perforation in ambulatory typhoid.

The President announced the appointment of a Committee on Credentials, composed of the following members: Drs. H. Bert. Ellis, T. C. Edwards and George H. Evans. The general session then adjourned.

Tuesday Afternoon.

SECTION ON GENITOURINARY AND SKIN DISEASES.

Dr. Lucas, Vice-President, in the chair.

Dr. George E. Abbott telegraphed that he could not be present, so his paper, the first on the program, was passed.

Dr. Alexander C. Garceau read a paper on "Erythema Keratodes," which was discussed by Drs. D. W. Montgomery, W. Lehman, Martin Regensburger, A. B. Grosse and M. Krotoszyner.

Dr. D. W. Montgomery read a paper on "The Conveyance of Syphilis by Medical Men," which was discussed by Drs. A. B. Grosse, M. Regensburger and Ralph Williams.

Dr. A. B. Grosse read a paper on "The Uses and Abuses of the X-Ray." Dr. W. Lehman read a paper on "Indications for Roentgen Therapy," and the two papers were discussed by Drs. A. Soiland, D. Montgomery, C. M. Cooper, S. J. Hunkin and F. B. Carpenter.

Dr. M. Krotoszyner read a paper on "Practical Application of Functional Diagnosis in Unilateral Kidney Lesions," which was discussed by Drs. Dudley Tait, W. P. Willard, Ralph Williams and Charles D. Lockwood.

SECTION ON MEDICINE, PEDIATRICS AND OBSTETRICS.

Dr. Geo. H. Kress read a paper entitled "Is Pulmonary Tuberculosis a Menace to the Health of Los Angeles?" This was discussed by Dr. C. C. Browning.

Dr. Woods Hutchinson, of Portland, Oregon, read a paper on "The Heart in Tuberculosis."

Dr. A. B. Cowan read a paper on "The Difficulties Attending the Artificial Feeding of Infants," which was discussed by Dr. Wm. Fitch Cheney.

Dr. H. S. Gordon read a paper on "The Adams-Stokes Syndrome with Report of Two Cases," which was discussed by Dr. Woods Hutchinson.

Dr. J. M. Hurley, of San Bernardino, invited any members who cared to do so, to come to San Bernardino where they would be met by teams and driven about the country.

Dr. Herbert Gunn read a paper on "Uncinariasis in California" and presented specimens. A recess of 5 minutes was taken to examine the specimens and when the meeting was again called to order the paper was discussed by Drs. Geo. H. Evans, Stanley Black and Geo. Ebright.

Dr. W. F. Cheney read a paper on "Human Glanders in California," and reported a case. His paper was discussed by Dr. Stanley Black.

Dr. R. F. Rooney read a paper on "Poisoning by Ceonothus Velutinus."

Dr. R. E. Bering read a paper on "Treatment for Morphin Habit by Hyoscin Hydrobromat," which was discussed by Drs. T. C. Edwards, H. S. Gordon, Stanley Stillman and George Cole.

The session adjourned at 5 P. M.

Wednesday, April 19th.

SECOND GENERAL SESSION.

The session was called to order at 9:30 A. M. by the Vice-President, the President read his address.

Dr. F. M. Pottenger read the report of the Tuberculosis Committee, which was discussed by Drs. Geo. H. Evans, Norman Bridge, and E. Von Adelung.

Dr. N. K. Foster read a paper on the "State Board of Health," which was discussed by Drs. H. A. L. Ryfkogel, J. Rosenstirn, E. Von Adelung and W. I. Terry.

Drs. Dudley Tait and Lincoln Cothran presented papers dealing, in the one case with the practical work of the board under the law, and in the other with Standards for Medical Education. These papers were discussed together by Drs. J. Rosenstirn, Walter Lindley, Stanley Black, Jno. C. King, T. W. Huntington, Norman Bridge and Dudley Tait.

The session adjourned at 12:04 P. M., 145 in attendance.

Thursday Morning, April 20th.

THIRD GENERAL SESSION.

The session was called to order at 9:25 A. M. by the President, and Dr. H. C. Moffitt began the Symposium on Diseases of the Gallbladder with a paper on "Diagnosis." Dr. C. M. Cooper presented the special discussion on this subject.

Dr. Ernest B. Hoag treated of the Pathology and his subject was discussed by Dr. H. A. L. Ryfkogel.

Dr. Dudley Tait read the paper by Dr. A. J. Lartigau on "Experimental Studies on Gallbladder Infection," which was discussed by Dr. Stanley Black.

Dr. Emmet Rixford read a paper on "The Surgical Treatment of Gall-Stones," which was discussed by Drs. Moffitt, Huntington and Tait.

A. S. Lobingier read a paper on "The Surgical Treatment of Conditions Other than Those Due to Gall-Stones," which was discussed by Drs. Stanley Stillman, Woods Hutchinson and H. C. Moffitt.

Dr. R. F. Rooney, the newely elected President, was then escorted to the chair by Drs. F. B. Carpenter and George H. Evans. After some very cordial words of thanks from Dr. Rooney, the session adjourned.

Thursday Afternoon.

SECTION ON SURGERY AND GYNECOLOGY.

Dr. Geo. N. Drysdale read a paper on "The Treatment of Compound Fractures," which was discussed by Drs. T. W. Huntington, Stanley Stillman and A. W. Morton.

Dr. F. R. Burnham read a paper on "Adolescence in Girls," which was discussed by Drs. Mary Baker, R. L. Wilbur and F. M. Pottenger.

Dr. Rose T. Bullard read a paper on "When to Operate for Fibroid Tumors of the Uterus," which was discussed by Drs. W. F. B. Wakefield and W. I. Terry.

Dr. Raymond Russ presented "A New Interdental Splint for Fractures of the Lower Jaw," and his remarks were generally discussed.

Dr. F. O. Witherbee made a "Plea for a More Simple Technic in Herniotomy," and his paper was discussed by Drs. W. I. Terry, A. W. Morton, Le Moyne Wills and W. E. Bates.

Dr. A. M. Henderson read a paper on "Multiple Tenotomy for the Relief of Spastic Paralysis," and his paper was discussed by Dr. Elbert Wing.

Dr. A. W. Morton demonstrated an operation for the Radical Cure of Umbilical Hernia, and his remarks were discussed by Drs. Le Moyne Wills and Emmet Rixford.

Dr. Z. T. Malaby read a paper on "The Surgical Treatment of Bright's Disease," which was discussed by Dr. Elbert Wing.

The session then adjourned.

SECTION ON DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Dr. F. D. Bullard read a paper on "Skiascopy," which was discussed by Drs. William A. Cundy, T. J. McCoy and William H. Roberts.

Dr. R. L. Doig read a paper on "Adenoids from the Standpoint of the Parent and the General Practitioner," which was discussed by Drs. M. W. Fredrick, Geo. J. Lund, R. W. Miller, A. L. Kelsey, T. J. McCoy and Fred Baker.

Dr. Hill Hastings read a paper on "Cerebral Abscess Following Acute Suppurative Otitis Media with Mastoiditis," which was discussed by Dr. Cullen F. Welty.

Dr. Cullen F. Welty read a paper on "Chronic Otitis Media in Its Relation to other Diseases of the Ear, and the Operative Treatment," which was discussed by Drs. A. L. Kelsey, Barton J. Powell, Hill Hastings and A. W. Morton.

The session then adjourned.

MINUTES OF THE HOUSE OF DELEGATES.

FIRST SESSION.

The first session of the House of Delegates was called to order at 8:25 P. M., April 17th, by the President. Roll call showed 51 Delegates present.

The report of the President was called for, and the President stated that he had no report other than the address which he would read at the second general session.

The Secretary's report was read and on motion referred to a special committee of 5. The President appointed on this committee Drs. Terry, Somers, Moffitt, Thomas and Cooper.

The report of the Council was presented by Dr. C. G. Kenyon and referred to the same committee.

The report of the Editor and Publication Committee was read and referred to the same committee.

The report of the Treasurer was presented on March 31st in the form of the bank balance.

The Committee on Scientific Work made no report.

The Committee on Public Policy and Legislation reported verbally by its Chairman, Dr. F. B. Carpenter.

There were no reports from the Committees on Arrangements and on Education.

Committee on Vital Statistics filed a written report after the session adjourned.

The amendments to the Constitution introduced at the 34th meeting were adopted, so that Article VI reads as follows:

ARTICLE VI.

OFFICERS.

Sec. 2. The officers, except the Treasurer and the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years, those first elected serving one, two and three years, as may be arranged.

Sec. 3. No Delegate shall be eligible to any office named in the preceding section, except that of

Councilor, and no person shall be elected to any such office who has not been a member of the Society for the past two years.

Sec. 4. The selection of the place of meeting, and the election of officers, shall be the first order of business of the House of Delegates at the second evening session of each annual meeting.

Sec. 5. All officers shall be elected by ballot, and shall serve until their successors are chosen and qualified.

On motion of Dr. Parkinson, the Secretary was instructed to add the name of Dr. Cluness to the roster of Sacramento County and to accept $2.00, the amount of the assessment for one additional member.

On motion of Dr. Parkinson the Secretary was instructed to charge $2.00 to profit and loss and to credit the same amount to San Luis Obispo County.

On motion, the Delegates from Sacramento and San Luis Obispo Counties were declared regularly seated.

The question of the rulings prayed for was referred to the special committee of 5.

On motion, the Secretary was instructed to charge the delinquent account of Dr. Callandreau to profit and loss, and to carry on the books the names of the other delinquent members, said names to be reported each year till delinquency is relieved.

On motion, the House of Delegates adjourned at 9:50 P. M., to meet at 8 P. M. on the 19th.

SECOND SESSION.

Called to order at 8:25 P. M. by the President. On roll call 64 Delegates, officers and Councilors were noted present.

The minutes of the first session were read and approved as read.

The proposed amendments to the By-Laws were read and adopted seriatim, as follows:

By-Laws, Article I, Section 3, to read as follows: It shall be the duty of the Secretary of each component society to furnish the Secretary of this Society before the first day of February of each year, a list of all members in good standing (with addresses) on the first day of January of such year.

Article IV, Sec. 4. Strike out the words "twenty-five dollars," in the 4th sentence, and insert in lieu thereof the words "two hundred dollars ($200.00)," and in the same sentence strike out the words "or business manager of the publication office."

Article VI, Sec. 2. Strike out the last sentence.

Article VIII, Sec. 13. Add to this section, after the words "House of Delegates," the following: "during the annual session of that year, nor thereafter."

Article X; add 2 new sections as follows:

Sec. 4. The fiscal year of the Society shall be from January 1st to December 31st and all books and accounts shall be balanced and closed on the 31st day of December.

Sec. 5. For the purpose of determining the amount of the assessment upon each component society for the fiscal year, the Secretary of each component society shall file with the Secretary of the State Society, on or before the first day of February of each year, a statement of the number of members in good standing on the first day of January of such year, as provided in Article I, Sec. 3.

The special committee of 5, Dr. W. I. Terry, Chairman, reported through the chairman and the recommendations of the committee were adopted seriatim, as follows:

1st. It is recommended that component societies be requested to take up the question of compulsory notification of tuberculosis, for the purpose of thoroughly discussing the subject and suggesting the best method of making this effective and indicating the class of cases that should be notifiable.

2nd. It is recommended that component societies be requested to elect their officers and delegates in December or January of each year.

3rd. Homeopathic or Eclectic physicians who are active members of homeopathic or eclectic societies are not, under such circumstances, eligible for membership in component societies of the Medical Society of the State of California.

4th. The question of lodge or contract practice, on recommendation, was referred to the Council to report at the next annual meeting.

5th. The Council is authorized to borrow the sum of $2,000.00 for 3 years for the purpose of paying in cash instead of deferring payments on such amounts as fall due from time to time. (The committee believed that this amount could be repaid by the increased earnings of the JOURNAL; but should this not materialize provision can be made for its repayment by an increase in the assessment for one or two years as the House of Delegates may determine.)

6th. It is recommended that the Council increase the salary of the Editor by $600.00 per annum whenever in its judgment this increase can be paid.

On motion, the report as a hole was adopted.

San Francisco and Del Monte were nominated as places for the next meeting, and a ballot being taken, San Francisco received 32 votes and Del Monte 31. San Francisco was therefore declared the place for the next meeting.

Dr. R. F. Rooney of Auburn was nominated for President by Dr. Thos. W. Huntington. There being no other nominations, the Secretary was, on motion, instructed to cast the ballot of the Society for Dr. Rooney, who was then declared elected.

The following officers were then elected:

1st Vice-President, Dr. W. W. Roblee, of Riverside; 2nd Vice-President, Dr. A. B. Cowan, of Fresno; Secretary, Dr. Philip Mills Jones, of San Francisco; Assistant Secretaries, Drs. H. P. Hill and Walter Hewlett.

Councilors: 5th District, J. L. Asay; 7th District, E. N. Ewer; 9th District, A. H. Mays; At Large, A. B. Grosse; 4th District, unexpired term, term expires 1906, George H. Aiken.

Dr. W. S. Thorne was, on motion, given the privileges of the floor and thanked the Society for having elected him in many past years to serve on the Board of Examiners. He was of the opinion that he had fulfilled his obligations to the Society and begged to be excused from further service on the Board.

On motion, a vote of thanks was extended to Dr. Thorne for his very efficient services.

The following were nominated for service on the Board of Medical Examiners and received the votes indicated: A. L. Cothran (34); Jno. C. King (34); G. F. Reinhardt (33); Dudley Tait (47); F. B. Carpenter (28); Ray L. Wilbur (24).

The President announced that the Society had elected Drs. Cothran, King, Reinhardt, Tait and Carpenter to serve on the Board of Examiners for the next year.

The following alternates were then elected: Drs. G. E. Abbott, Ray L. Wilbur and A. M. Henderson.

The following delegates to the American Medical Association were elected to serve for two years: Drs. Philip Mills Jones and H. C. Moffitt. The following alternates were elected: Drs. O. D. Hamlin, Geo. Cole, S. J. Hunkin and W. I. Terry.

Committee on Scientific Work: Drs. Harold Brunn, Philip K. Brown, C. M. Cooper and W. F. B. Wakefield.

Committee on Public Policy and Legislation: Drs. J. H. Parkinson, George H. Evans and H. Bert. Ellis.

Committee on Arrangements: Drs. H. A. L. Ryfkogel and G. E. Ebright and Harry M. Sherman.

On motion, the assessment for the next year was fixed at $2.00.

Delegates to the International Congress on Tuberculosis, Paris: Drs. George H. Evans and F. M. Pottenger. These gentlemen were also elected delegates to the National Association for the Study of Tuberculosis.

On motion, the recommendations of the Tuberculosis Committee were adopted and the committee continued.

On motion, Drs. Frank Ainsworth and Emmet Rix-

ford were appointed to arrange for railroad transportation and stop-over privileges for the next meeting.

On motion, the Secretary was instructed to write a letter to the State Board of Health, commending its excellent work.

A vote of thanks was then extended to the members of the Riverside County Medical Society for their very pleasant and satisfactory arrangements for the meeting and their entertainment of the visiting members.

The minutes were then read and approved as read.

PHILIP MILLS JONES, Secretary.

PROPOSED AMENDMENT TO CONSTITUTION.

FIRST PUBLICATION.

To amend Article X by adding after the second sentence the following:

The fiscal year of the Society shall be from January 1st to December 31st. The number of members in good standing in each component society on the first day of January of each year, shall be taken as the basis for the assessment for that fiscal year, as fixed by the House of Delegates.

TENDON TRANSPLANTATION.

By F. LANGE, Munich.

Translated by James T. Watkins, M. D., San Francisco.

[It has been said that the following paper, never before published in English, is the best essay yet written on the subject of tendon transplantation. The translation has been criticized on the ground that it followed too closely the German syntax. The contention is possibly true, but, as it speaks for the extreme accuracy of the translator, this may be considered rather a virtue than a fault.—Ed.]

MEINE HERREN: Vulpius has collected the literature of tendon transplantation with the greatest industry, and has given so excellent a presentation of the history of this operation that I need not now go into it. Consequently I believe I may go directly in medias res, and will especially emphasize those points concerning which I am of another opinion from the last speaker, Vulpius.

When, seven years ago, I was induced by the well-known work of Drobnik, to take up the operation of tendon transplantation, I was at first satisfied if—to use a simple example—with a paralytic club-foot I was able by means of the tendon-transplantation to prevent a recurrence of the deformity, and to bring the patient to the point where he could walk without apparatus. Soon, however, I perceived that the gait of my operated club-foot patients varied greatly.

At that time, with these paralytic clubfeet, in which there is as a rule a paralysis of the Extens. Dig. and of both Peronei, I always performed the same operation; I had split up the lateral half of the Tibialis Ant., transposed it to the outer side, and sewed it to the cuboid.

With all of these patients the operation was apparently equally successful; at least, the form of the foot was in all cases equally pleasing and equally correct; the whole sole was on the floor in standing; but, notwithstanding, the gait of the patients was very unequal. Two groups could be differentiated. Some of the patients always walked firmly and gracefully, so that nothing abnormal appeared in their gait; the others could walk equally well on the floor of a room; as soon, however, as they were compelled to walk out of doors and upon uneven streets, the gait became ungraceful, uncertain and limping. This fact so impressed me that I examined more carefully the results of my operations, and found that with those patients who walked well, active supination and pronation of the foot were possible. Consequently the foot could adapt itself to the irregularities of the floor. The other patients could perform distinct dorsal and plantar flexion; active supination and pronation were, however, impossible. This explained the uncertainty and clumsiness of the gait on an uneven surface.

These observations induced me to pay attention to the function of transplanted tendons, and to note just how far a split-up transplanted tendon retained functional independence. The result of these investigations was instructing, though in certain respects restricting (deprimirend). Only with the tibial. ant. can it occur that the split-off portion learns to work independently of the part left in place. With all the other muscles of which I have split up and transplanted portions, I have thus far never observed that the split-up portions have acquired a functional independence.

It is to be admitted, nevertheless, that the patients have received benefit from splitting the tendons in this way, since a normal shape of the foot was obtained by such tendon transplantation, and a recurrence of the deformity prevented. However, from a functional standpoint, the result of the operation in these patients was always a second-class result. This was true of the club-feet operated upon which did not learn separate supination and pronation. Still more striking was the inferiority of the result in cases where, for example, I had replaced the dorsal flexors by portions of the gastrocnemius, and in which, after this operation, the new dorsal flexors always contracted simultaneously with the remaining plantar flexor, with the consequence that separate dorsal and plantar flexion was impossible. Such a result of the tendon transplantation was no better than a successful arthrodesis; the foot remained as stiff and dead as an artificial foot, an improved circulation from active motion is absent, and both its usefulness to the patient and the satisfaction of the operator are diminished.

These experiences guided me in making my operation plans. I avoided as much as possible splitting tendons, and sought, as often as I could, to transplant entire muscles. In place of the splitting and partial plastic operation, I undertook the transplantation of the entire muscle, the total tendon transplantation. However, even after carrying out this operation, all patients did not get functional independence of the transplanted muscles. If, for example, with a quadriceps paralysis, I carried the biceps and semitendinosus forward to replace the paralyzed muscles, and permitted the semimembranosus to remain behind in the popliteal space, I have often observed that all three muscles contracted simultaneously after the operation, just as they normally do. The muscles which had been transplanted forward sought to extend the leg; the untouched semimembranosus, however, attempted a simultaneous flexion, and the motion resulted only after a conflict between the anterior and posterior muscle groups. If the anterior muscles were stronger, extension resulted; was the untouched semimembranosus more powerful, flexion ensued.

Though most of these patients received benefit from the operation, since they learned to walk without apparatus, still, in a functional sense, this result was only second class; at least, there occurred a quite unnecessary dissipation of strength if the anterior and posterior muscles worked at the same time. These experiences showed me that it is not always easy for the patients, even if the entire muscle is transplanted, to work independently with the new muscle, and to carry out the desired motions. I was further influenced by these facts in making my plans for the operation. I avoided as much as possible separating from one another muscles which as a rule work together. I sought further, in order to render more easy for the patients the independent contraction of the new muscles, to replace paralyzed muscles by muscles of the most nearly related function. My chief object was to obtain functional inde-

pendence for the transplanted muscle. At least the more important motions of the foot, dorsal and plantar flexion, supination and pronation, ought to be possible separately. Only then could one speak of a normal use of the foot.

The recognition of this fact induced me to completely alter my plans for operation. Till now, the construction of the operation plans had been for me a comparatively easy matter; each paralyzed muscle received from the neighboring healthy muscles a half or a third, till each paralyzed tendon was provided with living muscle substance. I think that most operators have at first done the same thing. It was easiest to follow the natural muscle relations. Vulpius includes the same view in his monograph to-day, and also carries it out in his operation plan. He, however—and according to my experience this is a mistake—does not take into consideration the functional independence of the transplanted muscle. He needlessly transplants to the dorsal flexors—to introduce examples—portions of the gastrocnemius, which never learn to work independently; he supplies simultaneously supinators and pronators with gastrocnemius muscle substance, and thus sacrifices the independence of the most important functions of the foot. Vulpius, who has deserved great credit for his warm recommendations of the new operation in the field of tendon transplantation, is an authority so highly valued by me that I dare not think lightly of his opposition on this important point. I beg, therefore, to be permitted to show the difference between the operation plans of Vulpius and myself, on the foot which becomes deformed through infantile paralysis, and which is for us the most important object for operation.

As I have already said, my aim is to obtain functional independence for all those muscles which are of importance for the normal use of the foot. Since split-off portions, as a rule, do not learn to work independently, I was compelled to transplant entire muscles. It is a very simple calculation: If three muscles are paralyzed, and if I replace these three paralyzed muscles by three other undivided muscles, I must sacrifice some function, or at least the independence of some functions. It is necessary, therefore, first to determine which muscles of the foot can best be dispensed with, or—to be more exact—in which muscles of the foot can one best renounce independence of function? The foot has nine long foot muscles; these nine foot muscles are the following: One plantar flexor (gastrocnemius), one supinator (tibial. posticus), two dorsal flexors (tibial. anticus and extens. digit.), two pronators (the two peronei), and finally three muscles which serve almost exclusively for the movement of the toes (extens. halluc., flexor halluc., and flexor digit.).

Of these nine muscles, three may, without further consideration, be dispensed with; at least, so far as functional independence is concerned; the extens. halluc., flexor halluc., and one peroneus. I can, for example, unhesitatingly employ the extens. halluc. to replace an important paralyzed muscle, if I stitch the peripheral stump of the extens. halluc. ascendingly upon the extens. digit.; since there is no necessity for an ability to extend the great toe separately. The same is true for the flexor halluc., and the same for one peroneus; for both peronei cause pronation of the foot; when the foot is used, both contract simultaneously as a rule, and from a functional standpoint it is quite immaterial whether both peroneal tendons are provided with power and made tense by one or by two muscle-bellies.

1. Based upon these considerations, the plan for operation is built up very simply on the principle of functional independence, so long as the paralysis is limited to from one to three muscles. Let us assume that the tib. ant., extens. halluc. longus, and extens. dig. are paralyzed. Tib. ant. is replaced by the flexor halluc. long.; extens. halluc. long. and extens. dig. together receive one peroneus; finally, the peripheral stump of the divided flexor halluc. is ascendingly stitched to the flexor dig., and the peripheral stump of the cut peroneus is united to the remaining peroneus. The presumption for this operation is that the paralytic tendons have not suffered too much through the paralysis, and that they have not become too thin and degenerated; for, otherwise, one would be compelled to altogether avoid using the paralyzed tendons, and to employ, instead, the periosteal tendon transplantation, an operation which I must later discuss more minutely. With such a paralysis, Vulpius proceeds in the following manner: Tib. ant. receives a section from the achilles tendon, that is the dorsal flexor is replaced by a portion of the plantar flexor, which can never learn to work independently. The paralyzed extens. dig. is supplied by its antagonist, the flexor dig., and furthermore, by a portion of the peroneus longus; the extens. halluc. is ascendingly united to the extens. dig. The other operation plans of Vulpius are similar whenever three muscles are deficient. From this one example, you see that Vulpius pays no attention to the functional independence of the force-exerting muscle, and that in consequence, even in these mild paralyses, we disagree in our operation plans.

2. Still more characteristic is the difference whenever the number of the paralyzed muscles is greater. If four muscles are lacking; for example, tib. ant., extens. halluc., extens. dig., and peron. long., Vulpius proceeds in the following manner: 1, the paralyzed tib. ant. is supplied by the tib. post. and the flexor dig.; 2, Vulpius unites a third of the achilles tendon with the paralytic extens. dig.; 3, the peron. long. is united ascendingly to the brevis; 4, the extens. halluc. is attached to the extens. dig.; and finally, the peripheral stump of the divided tib. post. is sutured to the achilles tendon. Therefore, the muscle-belly of the gastroc. supplies: 1, the rest of the achilles tendon, the plantar flexor; 2, the extens. dig., the antagonistic dorsal flexor; 3, the extens. halluc.; 4, the tib. post., which as a supinator is again an antagonist to the not only dorsally flexing but also pronating extens. dig.

Since split-off portions of the gastrocnemius do not learn to work independently, the result follows that as soon as the muscle-belly of the gastrocnemius contracts, all the named tendons simultaneously become tense, and fix the foot in the middle position, somewhat after the manner of an arthrodesis. Independent plantar flexion is impossible in such a foot; independent dorsal flexion can only be produced by the tib. ant. which has been provided with new muscle substance; however, this always brings the foot at the same time into the clubfoot position, because the independent co-operation of the extens. dig. is lacking. Is the result proportional to the quite complicated operation? With the exception of the flexor dig., all the muscles of the foot are provided with living muscle-substance. With regard to appearance, such a foot might resemble a normal foot; but, in respect of function, it is much less useful than a normal foot. How then would one solve this problem if one strove for the functional independence of the more important muscles and normal use of the musculature? If four of the long muscles fail, one must dispense with the mobility of the toes. This function is of secondary importance to shoe-wearing, civilized men, and one which most of us scarcely employ at all.

Therefore one may unhesitatingly employ the muscles which exclusively perform this function, the flexor halluc., flexor dig., and extens. halluc., to replace the paralyzed muscles, on condition that one takes away all the muscles which move the toes, flexors as well as extensors. One of the two groups

alone, however, must not remain behind, because otherwise toe-contractures arise which may become very troublesome. Therefore, with a paralysis of four muscles, there still remain five muscles for the more important functions of the foot. As a rule, with these extensive paralyses, the paralytic tendons are so thin and so easily stretched that, in the interests of an exact suturing and the trustworthiness of the result, it is recommended to avoid the use of the paralytic tendons, and instead of these, to employ the periosteal plastic operation which is essentially more certain.

The points of the foot-skeleton which must be supplied with muscle substance can be easily indicated on a diagram. First, the normal insertion of the achilles tendon, where the plantar flexor, the gastrocnemius, finds its hold; this point is marked I on the diagram. The points II and III indicate the attachment of the dorsal flexors; II corresponds to the insertion of tib. ant. on the first cuneiform bone. III is not a point of attachment on the normal foot; the muscle which must be attached there must extend along the anterior surface of the leg, similarly to the extens. dig. It works as a dorsal flexor, and at the same time as a pronator; from a functional standpoint it corresponds therefore to a part of the extens. dig., the so-called peroneus tertius. This muscle very often is absent in the normal foot. With paralysis of the extens. dig., however, the tendon of the peroneus tertius is as a rule so thin that it is advisable not to use it, and in this case the periosteal tendon transplantation is especially to be recommended. IV indicates the insertion of the tib. post., that is, of that muscle which is especially concerned in supination. Finally, V shows the insertion of the peron. brevis, the most important pronator. (Fig. I.) These five bony points must be provided with living muscle tissue. To be used for this purpose, there remain flexor hallucis, flexor dig., extens. halluc., and a peroneus. In place of the thirty-five operation plans arranged by Vulpius for the case when four muscles are paralyzed, this scheme alone suffices for me.

Let us turn now to the already mentioned paralysis of the tib. ant., extens. halluc., extens. dig., and peron. long. Flexor halluc. and flexor dig. are divided at the internal malleolus, transferred to the anterior surface of the leg, and carried to the dorsum of the foot through the medial and lateral compartments of the ligamentum cruciatum. The flexor halluc. is sutured to point II and the flexor dig. to point III. The patient can move his foot which has been operated upon in this way separately in dorsal and plantar flexion, and, if he wishes, in supination and pronation, these being the functions which are necessary in the daily use of the limb. The object is attained through the transposition of two muscles; Vulpius for the same paralysis cuts through four entire muscles and splits up part of two muscles—that is, six times makes a tendon-to-tendon suture—and still his result is from a functional standpoint much inferior to that of the simpler operation. In proportion as the paralyses are extensive, the greater become the differences between Vulpius' operation plans and my own. According to Vulpius' views, if five muscles are paralyzed the remaining muscular power can only be divided up so that it holds the ankle joint which has been fixed by shortening all the tendons as nearly as possible in equilibrium. In such cases, Vulpius dispenses with all active motion of the foot; for example, he distributes the remaining musculature to the dorsal flexors, and seeks to obtain only a right-angled position of the foot. Of all the plans which Vulpius proposes for the paralysis of five muscles, I cannot accept a single one; for all suffer from the fact that Vulpius takes into consideration only seven long foot muscles. As a matter of fact, however, there are nine which may be employed. In order to explain this mistake, I am compelled to consider in a few words the diagnosis of muscle-paralysis.

When I began to perform tendon transplantations, I tried hard to determine the paralyses of individual muscles by taking their electrical reactions. That is, I used the same method which most internists employ to-day. I convinced myself that this method did very little for our purposes, because little children for the most part struggle hard and render an exact knowledge of the voluntary motions impossible. In this view I agree entirely with Vulpius, and with children have found it of greater advantage instead of using electricity to induce movements by tickling the soles of the feet, etc., and thus to study and palpate the tendons of individual muscles. In this way information may be obtained of the condition of all the muscles of the foot—with the exception of the flex. halluc. and the flex. dig. These two muscles are so deeply placed that they cannot be palpated, and in the doubtful cases the only alternative is to expose them during the operation. These are the two muscles which Vulpius does not take into consideration, if he counts only seven foot muscles; and this then explains his mistaken assumption that if five muscles are paralyzed, only two remain to replace them. In reality, the foot has nine muscles. If five are paralyzed, four remain to replace them. The bony points which are or which must be provided with living muscle tissue are the same as in the preceding diagram, only in those cases where five muscles are paralyzed, points II and III must be supplied by a single dorsal flexor. How that is accomplished is in principle immaterial; either the dorsal flexor can be split, or a silk tendon can branch off from the unsplit muscle. So long as two muscles are present which cause separate supination and pronation, with a paralysis of five muscles, a usefulness may be acquired which is not much inferior to that of a normal foot.

3. More difficult is the construction of an operation plan when six muscles are paralyzed. Vulpius, who with a paralysis of five muscles, was compelled to dispense with active motion of the foot, expects in these paralyses nothing from the tendon transplantation, since he can produce only one muscle to replace them; whereas, there are in reality three muscles which can be employed. Even in these feet my aim is as much as possible to obtain functional independence for the individual muscles; as I have already shown, that is only possible if splitting the muscle is avoided, and therefore only three bony points can be provided with muscle tissue; they are the points I, II and III. If for example all the muscles are paralyzed with the exception of the gastroc., tib. post., and peron. brevis, the tib. post. and peron. brevis are divided at the level of the malleoli, carried forward on the anterior surface of the leg, drawn under the lig. cruciat., and finally the tib. post. attached to II and the peron. brevis to III. (Fig. 2). One must be sure that no muscles remain which are attached to points IV and V. These muscles which are there exclusively for supination and pronation (tib. post., per. long., and per. brevis) must be completely sacrificed, because otherwise contractures can occur in the sense of varus or valgus. A foot operated upon after the described method is plantar-flexed by the gastroc., which inserts at I; II and III cause dorsal flexion; II alone, dorsal flexion and supination, I and II, plantar flexion and supination. In like manner, pronation is caused by III or by I and III. Therefore, separate plantar flexion, and separate supination and pronation are possible; that is to be seen in the photographs of these children, in whom six muscles had been paralyzed, and only three were left, and in whom this operation plan was carried out.

M. R. Paralysis of right foot in consequence of poliomyelitis; retained R. only gastroc., extens. halluc., and extens. dig. In Oct. 1902, the last two muscles were united with the periosteum at II and III. Fig. 3 shows

the function in May, 1902* (dorsal flexion), Fig. 4 (plantar flexion), Fig. 5 (pronation), Fig. 6 (supination).

Patients who have been operated upon in this way can perform the most important motions of the foot. They learn to walk firmly and well; still, in my experience, the loss in muscular force shows itself in the fact that the foot tires more quickly than a foot in which four or five healthy muscles can still be used. If seven muscles are paralyzed, and only two muscles present, as a rule supination and pronation must be dispensed with, while separate dorsal flexion and separate plantar flexion can be obtained if the points II and III are supplied by a single muscle. Thus, for example, with the gastroc. as a plantar flexor, and the extens. halluc. as a dorsal flexor, I have still obtained a foot in which active dorsal and plantar flexion was possible through about half the normal range of motion, but of course with diminished strength. In order to compensate for the instability which arises from the loss of independent supination and pronation, and to prevent bending when on an uneven surface, these patients must be given especially strongly made shoes, and an insole of celluloid and steel wire.

In the very severe paralyses, in which eight muscles have been destroyed, and only one retained, of course an active mobility of the foot worth mentioning is, as a rule, not to be expected from the operation. If a strong gastroc. is present, the medial and lateral thirds of the achilles tendon can be split off, brought forward to the anterior surface of the leg, and sutured to points II and III. The three muscles which are obtained in this way do not learn to work separately, but by their contraction they fix the foot in a right-angled position, as after a successful arthrodesis operation. If only a thin muscle belly like that of the peroneus is left, as a rule such a result cannot be obtained. For the correction of the contractures, the splitting-off and transplantation of a portion can be of value; however, an artificial stiffening of the ankle joint—either through an arthrodesis or a small splint-insole of celluloid and steel wire—cannot be dispensed with.

I have attempted to convince you that in extensive paralyses, all the paralyzed muscles should not be provided with power—as Vulpius tries to do—but that, above all, functional independence of the transplanted muscles and a normal use of the joint operated upon must be sought, and that to obtain this result less important muscles must be sacrificed. If, for example, only four or five foot muscles are present, the problem to obtain a useful foot is to be solved in another way than if nine muscles can be employed as in the normal foot; and with all respect and all admiration for the sufficient arrangement of the musculature of normal joints, in paralyzed joints one need not shrink from deviation from the normal order of arrangement of the muscles, in order to obtain the most nearly normal function for the joint. I beg you earnestly to test for yourselves these assertions of mine which I have made on the basis of my experience in over 200 operations, and I hope that you will be the more easily induced to do so as the operation plans are so simple, if the principle of the functional independence of the new muscles is kept in the foreground.

With three schematic diagrams, I could place before you the operation plans for all paralyses of the foot. For carrying out his methods, Vulpius requires 116 operation plans, and even then not all the possibilities are exhausted, because, as I have already shown, Vulpius does not take two muscles into consideration. What I have already told you forms the theoretical groundwork of my operation. Its practical performance would however encounter insurmountable difficulties, if we were confined to the original method of tendon transplantation, which transplants the force-giving muscle to the paralyzed tendon. I need only to direct your attention to the insertion point III of my diagram, which does not occur at all in the normal foot, in order to show you that in many cases the transplanted tendon must be attached directly to the bone. To this must be added that the result of the older method is absolutely dependent upon the condition of the paralyzed tendons. But the fewer the muscles remaining on a foot, the more important is it that these few muscles work with absolute certainty. Therefore in all severe paralyses I employ as a rule the periosteal method. In the beginning I have recommended this method because I not seldom found the tendon of the paralyzed muscle so thin and friable that a reliable suturing of the force-giving muscle with the paralyzed tendon was impossible. This occurs not only in tendons which in themselves are delicate and thin, but it is true as a rule of those tendons which under normal conditions are strong and thick, as, for example, the quadriceps tendon. On this point, the observations of Krause, Vulpius, and myself, entirely agree. Vulpius has for this reason given up the old method of tendon to tendon suture in quadriceps paralysis, which offers the most difficult problem for tendon transplantation; and in its place has, following my procedure, taken up the periosteal suture. Thus he has admitted the advantage of the periosteal method as opposed to the original tendon transplantation. Nevertheless, in his monograph, Vulpius expresses all possible objection to the periosteal method; since my operation plans rest for the most part upon the periosteal method, and stand or fall with it, I must more fully discuss his objections. Vulpius questions whether the suturing of the tendon to the periosteum, which in places is quite friable, can be more certain and more permanent than the suturing to tendinous substance. As a matter of fact, in adults the periosteum of many bones, as for example the tibia, which has to be considered in a quadriceps plastic operation, is not a very thick membrane; however, this disadvantage is richly compensated for by the great surface-attachment which the periosteum of this bone offers. If one begins above, on the insertion of the lig. patell. inf., to use periosteum, the upper third, and even the upper half of the periosteum of the tibia may be basted with silk threads, and it is not necessary to confine the suture to the anterior surface, but one can also employ the lateral surface of the tibia for points of attachment for the suture, so that as a matter of fact the suture is much firmer on the periosteum than is possible with a single tendon.

Still more advantageous are the conditions in the foot, and especially in the feet of children, who represent the chief contingent of our patients for tendon transplantation. The periosteum of the child is of itself much thicker than that of an adult; further, the periosteum is strengthened by the ligaments and the prolongations of the joint capsule and of the tendons, and finally in youthful patients the surface of the bones is still partly cartilaginous. All these points can be pierced, and the thread acquires in this way a hold such as is never obtainable by suturing to a tendon. The certainty of the periosteal suture I value so highly that even in tendons which have not suffered from the paralysis—as for example in Little's disease—I repeatedly give preference to the periosteal suture.

Since in the course of years and on the grounds of my experience, I have somewhat modified the technique of the periosteal transplantation, I again give a connected description.

Let us assume that we have to do with a paralysis of the extens. dig. The problem is to obtain a muscle which

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Figs. 2 and 3 are copied from the original photographs, because the photographs themselves are not suitable for reproduction.

*This must be a typographical error for 1903, since before the operation such motion would be impossible.—Translator.

dorsally flexes and pronates. It must attach at point III to the dorsal surface of the cuboid. The extens. halluc. can be employed for this purpose. An incision on the dorsum of the foot exposes the extens. halluc. The tendon is divided at about the middle of the dorsum of the foot. The central end is isolated and basted with silk for the distance of 2 to 3 cms. The fourth metatarsal and the cuboid are exposed through a second incision on the dorsum of the foot running 3 cms from the border of the foot and parallel with it. With a long kornzange (forceps?) a canal is made by blunt dissection in the subcutaneous tissues from the lateral to the medial wound. Through this canal the tendon of the extens. halluc. is drawn to the cuboid, the new insertion of the muscle. Now the periosteum of the cuboid is split for the distance of 2 cms, pushed back, and the end of the tendon placed in the cleft of the periosteum; then the two silk tendon threads are carried by two or three stitches through that part of the periosteum of cuboid and last metatarsal lying peripherally to the periosteal cleft, the needle piercing as deeply as possible. At the same time I try to avoid carrying the needle into the joint; however, I go unhesitatingly with my suture in to the wall of the joint capsule through the ligaments and through the cartilage. When the sutures are passed deeply enough, difficulty is encountered as a rule in extracting the needle, therefore thick sharply curved needles with short points must be employed. When both threads have been carried through, they are pulled upon according to the tension desired for the new muscle and then knotted. Finally, the loosened periosteum of the cuboid is drawn together over the tendon by two or three sutures.

In order to prove experimentally the reliability of the periosteal suture, I have made investigation on cadavers. In a child's cadaver, Vulpius' modification of Nicoladoni's suture (tendon to tendon) withstood a pull of only 2 to 3 kg.; my periosteal suture on the other hand only cut through under a strain of 14 to 15 kg. It withstood five times as much strain as Vulpius' suture. On the body of an adult Vulpius' suture was able to stand a strain of 10 kg.; the strength of the periosteal method could not in this case be certainly determined, since the silk threads broke under a pull of 30 kg., while in spite of the extreme strain put upon it the periosteum had not given way in the least.

With our patients the conditions are much less suitable for Vulpius' tendon, since we have to do with paralyzed tendons, which are often extraordinarily friable. I suspect that many paralyzed tendons give way under a pull of 100 to 200 g., and I do not think myself wrong, if in such cases I value the strength of the periosteal suture as 100 times greater than that of Vulpius' suture. In spite of all advantages which the periosteal method offers, it could, however, have found only a very limited employment in our practice, since many muscles are too short to unite them with the new points of insertion, which in many cases is necessary. I have therefore repeatedly elongated the transplanted muscles by means of silk tendons, and in this way I have rendered possible a general employment of the periosteal method in all cases. As you know, Gluck was the first who employed artificial tendons of catgut to replace defects of tendons. His works have in his own time not received the consideration which they deserved, and therefore I take a special satisfaction in saying here that the experiences which I have had with 120 silk tendons support throughout Gluck's original assertion.

Vulpius has a good deal to say against the silk tendon just as against the periosteal transplantation. Therefore I gladly take this occasion to repeat the further observations which I have made about tendon transplantation with silk tendons. I have already said that the primary healing of a wound in which had been placed a silk tendon, presented no difficulties. Even with a disturbance of the wound healing, the silk tendon can still heal in.

Two years ago I made experiments with the serviceableness of celluloid thread in tendon transplantation; and in a quadriceps plastic operation, where I made a 10 cm. long silk tendon, the skin sutures were made with celluloid thread. The skin sutures all suppurated, the edges of the wound separated, and the silk tendon was visible in the floor of the wound. Nevertheless it finally healed in, and holds to-day. Incidentally I wish to remark that my experiments with celluloid thread proved entirely unsatisfactory, and I emphatically recommend the employment of silk for artificial tendons and of silkworm for skin sutures.

However, I wished to inform you of my experience with silk tendons. The result is not finally assured by the primary healing in. In my earlier publication, I have already reported that in two paralytic pes equinus cases I have observed that the silk tendons of the newly made dorsal flexors, in consequence of too great a tension, have cut through the skin of the dorsum of the foot. This danger, the tension decubitus, I have learned in the meantime to avoid. If we have to do with a severe paralytic pes equinus, and for example only the tib. post. and peron. brevis. can be employed to replace the paralyzed dorsal flexors, so that the employment of silk tendons is necessary, I obtain first through a ruthless over-correction a high grade pes calcaneus. While the foot is held in the extremest calcaneus, I suture the transplanted tendons under light tension, and fix the foot in the same position. If after six or eight weeks the dressing is removed, the foot remains at first in the calcaneus position, and sinks only in the course of two or three months back to the right-angled position. During this time the silk tendons become surrounded with true tendon tissue, and the strong tension of the artificial tendon which is caused by the sinking of the foot from the calcaneus position to the normal middle position has then no further evil consequence. So much for the tension decubitus.

A further danger for the silk tendon is the knot decubitus. If for example I make a silk tendon and have had to employ for it two to four threads of No. 12 silk (Turner), I have in the beginning knotted the threads to the periosteum. In this way is made a knot which has a radius of 2 to 3 mm. On fatty portions of the skin, as for example on the anterior surface of the leg, such a knot is quite insignificant. On lean portions, however—for example on the dorsum of the foot—such a knot makes a prominence which can be felt through the skin. In this way is caused the danger of decubitus at this point at the subsequent use of the foot.

This also did I learn through experience. In two patients with clubfeet primary union occurred; after the removal of the dressing they were sent home with completely closed cicatrices. However, a few weeks after the discharge, the thin cicatrix over the tendon-knot on foot was rubbed through by using the foot; and in this way the knots were exposed in the decubitus wound. Since not enough natural tendon-tissue had developed, I confined myself to regularly painting the knot with iodin, and careful antiseptic bandaging. But at the same time in order to stimulate tissue growth, I permitted free use of the foot. In both cases I was able to avoid a severe infection of the silk tendon, although for months an opening the size of the head of a pin persisted at the site of the knot., out of which was discharged in small quantities a cloudy serous secretion. When after six months sufficient tendon-tissue had developed, I removed the knots with a knife. In both patients the wound then closed, and the complete result of the operation was retained.

This danger of knot decubitus can likewise be avoided, if instead of on the periphery the knot be placed centrally on the tendon, where it is protected by a sufficient fatty pad of the skin, and on the other hand it attaches the U-shaped bend of the silk thread to the periosteum.

(To be continued.)

Special Rates to Portland.

Word has been received from the Committee of Arrangements of the American Medical Association that Eastern Trunk Lines and the Central Passenger Association have granted a one fare round trip rate, thus making a one fare round trip rate to Portland from all parts of the United States. The side-trip to Alaska will probably be as low as $60; the date of sailing about 16th or 17th of July.

NEPHROTOMY FOR STONE IN THE KIDNEY; EXCESSIVE HEMORRHAGE; NEPHRECTOMY; RECOVERY.*

By C. M. COOPER, M. B., and WALLACE I. TERRY, M. D., San Francisco.

B. B. Machinist, 31 years of age, married, with a family, one of whom has tuberculosis of the hip joint, came to my office complaining of deep-seated pain in the right lumbar region of fifteen years duration. This pain was dull in character, more or less constantly present, frequently underwent exacerbations both by day and night and necessitated his laying off work for about two days every week. During the fifteen years the pain had never radiated to the shoulder or to the testis, and though often brought on by active movements, yet frequently occurred when he was entirely at rest. There had never been any frequency of micturition nor any discoloration of the skin. He had vomited only on two occasions and his bowels had been regular. He had never noticed anything abnormal about the urine or about the bowel discharges, he was losing no weight, and in fact apart from the pain, considered himself an exceptionally healthy man, having previously suffered only from influenza. His pain had been variously ascribed to chronic appendicitis, gallstone trouble, stomach adhesions, lumbago and kidney gravel by physicians who had seen him during some of the exacerbations above referred to. To relieve these he had been in the habit of taking hot gin and water which he considered only fairly efficacious.

Examination showed a short, spare, muscular man with clear skin and conjunctivæ, whose heart and lungs were sound; whose liver and spleen were normal in size, and whose nervous, glandular, locomotory and hemopoietic systems were healthy. There was some rigidity of the right side of the abdomen both of the anterior and posterior muscles, this rigidity being more marked in the upper quadrant. There was tenderness in the right loin anteriorly and posteriorly and pressure all along the 12th rib caused pain.

The right diaphragm was higher than the left, moved to a less extent, and the respiratory murmur over the right lung base was faint, the percussion note, however, being normal. There was no tenderness at McBurney's point. He could actively move and I could passively stretch his muscles and ligaments without causing him pain, but jumping off a chair in my office produced a characteristic exacerbation.

Stomach examination revealed nothing abnormal. The tongue was clear, the appetite good. The rectal examination negative. Immersion in a hot bath relaxed his abdomen and I could then palpate the lower pole of his right kidney which was distinctly tender on the slightest pressure, whilst Murphy's maneuver elicited no gall bladder tenderness. Each twenty-four hours urine was collected for a week and a specimen examined daily, as also the urine passed after handling the kidney (and in this connection I would add that it is only gross changes after such handling that have a real clinical significance). The average amount of urine for twenty-four hours was from 45 to 50 oz.; specific gravity 1020, acid containing no albumen or sugar, but a few epithelial and white blood cells and a few calcium oxalate crystals; nothing positive.

Diagnosis. In view of the above findings it seemed that at this time the appendix, gall bladder, stomach and lumbar muscles as causal agents of the pain could be definitely ruled out, and that the right kidney was at fault; that there was probably some perinephritis involving the diaphragm, particularly the fasciculus arising from the last rib. Moreover, the fixed pain, the duration, the tender lower pole of kidney with absence of anything abnormal in the urine except the few crystals; the maintenance of the general health, the exacerbation produced by jumping off the chair, indicated a renal calculus as the most likely lesion, this calculus probably being of the hard variety firmly fixed in the surrounding tissues. Such a diagnosis was made.

A radiogram was taken and showed distinctly the shadow of the stone and the absence of any in the left kidney and ureter, the fluoroscope giving the same result. I have brought here tonight a print which shows distinctly the shadows cast by the kidneys and the spleen, as well as the more transparent areas of the ascending and descending colon, and which thus demonstrates what an indispensable adjuvant the X-ray is to our other clinical methods of diagnosis.

Knowing the patient had a left kidney free from calculus and normal in size, and that he was passing a normal amount of normal urine, I did not segregate his bladder or catheterize his ureter; after meditation I consider such an omission to have been an error and that scientifically I had no right to assume a fact, the truth or fallacy of which I could readily have demonstrated. I asked Dr. Terry to aid me and for the future conduct of the case we are equally responsible.

Operation. The usual posterior oblique incision was made in the right loin and the kidney exposed. It was higher up under the ribs than usual, large, congested, and adherent to the surrounding tissues, more particularly to the diaphragm. The calculi could be easily palpated in its lower half. There was some difficulty in delivering the kidney, but this was finally accomplished, though looking back we believe that a speedier and less traumatic way of doing so would have resulted from a preliminary, subperiosteal division of the twelfth rib. An incision was made into the pelvis along the anemic line, the knife there striking the stone. This incision was extended to include about one-third of the length of the kidney. The stone of the oxalic acid variety was found to be irregular and its processes very firmly fixed in the calices. It was loosened as much as possible with a blunt dissector, but its extraction was difficult, so firmly embedded were its component parts. After removal of the pelvic stone, another smaller one was found in the kidney tissue. A finger was introduced into the pelvis and the other calices explored and a ureteral sound passed. In view of the congestion the organ was now decapsulated, three chromic gut mattress sutures introduced, the kidney replaced, and the external wound closed except for a cigarette drain down to the kidney. There was extremely little hemorrhage throughout the operation, the incision along the anemic line giving apparently every satisfaction.

After progress of the patient. The after treatment was as usual. During the first twenty-four hours 17½ ounces of dark red urine were passed. During the second twenty-four hours 19 ounces of dark red urine were passed. On the morning of the third day the cigarette drain was removed. This was followed by the oozing of about six ounces of dark red blood. The wound was plugged and the hemorrhage ceased, to be again temporarily renewed that same day during a bowel movement; the patient then losing about two ounces. The wound otherwise was quite healthy and that night his tongue was clean, his temperature 98.6°, pulse 84, respiration 22, the amount of dark red urine passed in the third twenty-four hours being fourteen ounces.

On the morning of the fourth day he suffered from an attack of renal colic due to the passage of a blood clot. From that time to the morning of the seventh day after operation he passed varying amounts of blood in his urine, there being, however, no further hemorrhage from the wound. Sometimes the urine would be almost clear, but the bleeding

*Read before the San Francisco County Medical Society, July, 1904.

would again recur. During this time uremic symptoms developed and he became a very sick man. On the morning of the seventh day he, for the first time, passed clear, normal urine; thus for the first time demonstrating a normal physiological left kidney; but now his right loin began to fill up. His pulse was 140, weak and irregular. We at once opened up the wound. Its margins were infiltrated with partially coagulated blood clot. The kidney lay in a bed of this same clot. This was rapidly shelled out, but owing to retraction and fixation of the renal pedicle the kidney could not be delivered and any attempt to do so would, we feel sure, have led to tearing of the pedicle, hence knowing the other kidney was healthy and as blood was flowing freely from the whole incision and more particularly from the upper angle under the ribs, we decided to do a nephrectomy. The pedicle was clamped piecemeal with several clamps and the kidney excised, the clamps, in view of the patient's condition, being left in position. During the operation Dr. Sherman kindly infused the patient with a solution of epinephrin. The examination of the removed kidney showed that the bleeding came from the whole cut surface, that there was no opened large vessel, and no calculus had escaped notice. There had been practically no attempt at healing, the raw surfaces being covered with unorganized blood clots.

The future progress of the patient was satisfactorily uneventful. The forceps were removed at the end of 72 hours, the wound quickly filled up and completely healed and the man is now able to work six days in the week without pain and is passing daily a normal amount of normal urine.

RECURRENT ECLAMPSIA, WITH REPORT OF CASE.

By. O. B. SPALDING, M. D., Yreka.

I WAS recently called to attend a supposed confinement case, twenty miles from town, the mounted messenger urging haste. On my arrival at the cabin, I found the patient in the throes of eclampsia, and I think that I may be pardoned for dreading the outcome, as hospital or medical assistance was out of the question. To those of us who have had to deal with such cases, the picture presented by the unfortunate subject during an attack can never be forgotten.

Patient aged 20 years, married, became pregnant for the first time eighteen months ago. Seven months later, she was suddenly seized with severe frontal headache, cardialgia and dimness of vision, followed by convulsions. Drs. Dwinell and Tebbe, of Montague, were summoned. Notwithstanding their efficient medical treatment during 27 attacks covering a period of 14 hours, a dead child was spontaneously delivered. She had no further attacks, but remained in a more or less comatose condition for 48 hours. From that time until the present attack, her mind has been clouded, and general health poor.

The present attack commenced in a manner similar to the first, severe frontal headache and cardialgia, followed by sudden and complete loss of vision. Previous to my arrival, she had five attacks covering a period of three and a half hours. I found her in a sixth attack, lasting four minutes, followed by profound coma, temperature 101°, pulse weak and rapid. There were no signs of the onset of labor; fetal heart or movements could not be distinguished. A seventh attack occurred in twenty-five minutes, followed by four more at diminished intervals, and increasing severity. Seven and a half hours after the initial attack, temperature 104°, pulse 140, weak and compressible. As hot pack, morphin and chloroform were apparently unavailing, and still no signs of labor, I decided to empty the uterus.

The cervix was not dilated, but dilatable, pressure from above over the fundus rendered the subsequent efforts at dilation easier. Following the method advocated by Philander Harris of New Jersey, with the left hand; then introducing the index and finally the middle finger of the right hand, and exerting steady traction at short intervals, first transversely, then obliquely, and finally antero-posterially, I succeeded in fully dilating in thirty-five minutes. Dehrssen, of Berlin, advocates making deep lateral incisions, but I did not consider it justifiable in this case, on account of the surroundings and the danger of irregular tearing, hemorrhage and subsequent infection. Following rupture of the membranes, and delivery with high forceps, of a dead child, the patient rested quietly for two hours, without, however, regaining consciousness. Then the fingers of her left hand began to twitch spasmodically, followed by a severe attack lasting four and a half minutes. Thirty-five minutes later, the significant twitchings of the fingers which had preceded all the previous attacks recommenced. I immediately administered chloroform, and was gratified to find that it had the desired effect, the fingers relaxed and there were no subsequent attacks.

Since then, the patient has had an uninterrupted convalescence. Twelve hours following delivery, she was perfectly conscious, vision clear, urine contained but a trace of albumen. At the present time, her mental condition is better than it has been at any time during last eleven months.

On looking over my authorities, I find considerable divergence of opinion as to the frequency of this dread disease. Garrigues puts the ratio at 1 in 330; Auvard, 3 in 1,000; Martin and Kaltenbach, 1 in 500; Vinay, 1 in 250 to 260; Gellett, 1 in 357.48. In the Rotunda Hospital amongst 15,109 patients, the relative frequency of eclampsia was 1 in 359.73, i. e., .27%.

Regarding the several periods in which the disease is manifested, and the time in each of these periods Kaltenbach's statement is that while the disease may appear toward the end of pregnancy, it is more frequent in labor; most seldom after it. Pajot has given the following: During labor 100, before, 60, and after, 40. The recent studies of Goldberg including 1,120 cases show that in 21.07% the disease appeared in pregnancy; in labor, 56.34%; after, 22.59%. Bailly gives as the order of frequency: Pregnancy, labor, and the lying-in, and he has attributed the discrepancy among authorities, in part, to the fact that as the disease so commonly induces labor, cases that really belong in pregnancy have been included in those that belong to labor.

Regarding treatment, in the Rotunda Hospital it is directed chiefly toward two points: (1) The arrest of the fits; (2) the staving off of complications, (a) by administering sedatives, (b) by removing toxic substantives from the blood and tissues, (c) by emptying the uterus. (a) is accomplished by the chloroform and chloral treatment, and the morphia treatment. The chloroform and chloral treatment consists in administering upon the onset of the attack 30 grains of chloral hydrate by the rectum, and repeating every two hours until the fits cease, but not more than 3½ drams should be given in 24 hours.

The inhalation of chloroform is commenced as soon as any sign of the onset of the fit occurs, and continues until the fit ceases. The morphia treatment consists of the administration of large doses of morphine hypodermically, as recommended by G. Veit. It is considerably the better method of treatment and is carried out as follows: A half grain hypodermic is administered upon the onset of the first fit, and is followed every two hours by ¼ grain, until the fits cease; not more than 3 grains should be given in 24 hours.

(b) Purgatives are freely used, and every effort made to encourage free sweating. The kidneys are stimulated by hot stupes, and an abundance of fluid by mouth, if the patient is conscious; also by intravenous or subcutaneous injection of normal saline solution.—(Jardine.) At the Glasgow Maternity Hospital, in association with saline infusion, venesection, when possible, is extensively employed. Up to 17 ounces of blood have been withdrawn at one time with very satisfactory results.

In Vienna, in the Universitats-Frauenklinik, we were taught to rely mainly on hot baths, wet packs or hot air baths, chloroform and chloral, and failing in that, to empty the uterus; but the use of morphia was contraindicated. The four cases I saw treated in this manner; unfortunately, all resulted fatally.

Prognosis.—Jellett says: "The prognosis for the infant is always very grave; for the mother the prognosis varies according to the time at which the fits commence. It is worse when the onset of the fits occurs during pregnancy, or labor; it is best when they start during the puerperium. The greater the number of fits the worse the prognosis." The number of seizures may be very great. Kaltenbach refers to 80; Vinay to

more than 100. Winckel has seen but one case of recovery after 18 attacks, but Vinay says that a patient has recovered after 46. Olshausen had six patients who recovered having from 22 to 36. As a rule 10 fits constitute a very serious case.—(Düehrssen.) If the child dies the maternal prognosis is improved. The amount of urine passed and the quantity of albumen in it, the temperature and the condition of the heart and lungs are also important guides.—(Jellett.)

In my case, the points that appealed to me were the recurrence of the eclampsia in the subsequent pregnancy, the large number of attacks in the first—26—with partial recovery; her very critical condition in the second pregnancy after 12 attacks, as shown by the high temperature and the condition of the pulse; the comparative ease with which accouchement force may be employed under favorable conditions; the occurrence of labor in the first case, and its entire absence in the second; also the time of occurrence—7th month in the first attack and 8th month in the second.

Regarding the recurrence of eclampsia, I should be very glad if any member of the Society who is interested in the subject would enlighten me, as the authorities at my disposal do not mention such a contingency.

OSTEOMALACIA.*

By. C. S. STODDARD, M. D., Santa Barbara.

I DESIRE this evening to report a case of this disease which has been under my professional care for some time, not because of any newly discovered mode of treatment, or unusual results of treatment, but rather because it is exceedingly rare, and therefore of interest from a pathological standpoint.

The etiology and pathology of this disease is indeed veiled in obscurity. Its extreme rarity has afforded little opportunity for investigation, and works on pathology, therefore, throw but a dim and uncertain light upon its nature and origin. The most reasonable conclusion at the present day is that it depends upon mal-assimilation of the calcareous elements of the food, while the lime salts, or earthy constituents of bone appear to dissolve, or disappear, under the influence of some morbid process, leaving only the medulla and periosteum as an elastic membranous cylinder, affording little support to the superficial structures, and capable of motion in all directions. The pelvic bones are those most frequently affected, then the vertebræ, and extremities, in the order given.

Observers have found that pregnant women are most liable to the affection, and that partial recoveries, or at least a check in the progress of the disease, may take place between successive pregnancies, each recurring pregnancy intensifying and aggravating the disease, thus giving origin to the idea that the disease was in some way related to the reproductive process.

Upon this theory, Fehling has recommended the removal of the ovaries as a preventive measure, in all cases appearing during the child-bearing period of life, basing his opinion upon the good results in a number of cases. While very rare on this continent, the disease is met with more frequently in Southern Germany and in Austria than in any other portion of the civilized world. Why this is so, seems undetermined.

We arrive at a diagnosis only after the disease has passed into its second stage and presents its characteristic osseous deformity, viz.: fullness in the contour, or curvatures and angles in the shaft of long bones, resulting from normal muscular contraction. The early symptomatology often leads to the diagnosis of rheumatism, of the muscular variety, or neuralgia, or a dual complication, so closely does it resemble these diseases.

The anti-rheumatic treatment, however, fails to influence its progress, the tendency of which is to go from bad to worse, until the time arrives when some bony prominence, or deformity, furnishes the key to the mystery, but unfortunately no key to the remedy, and we are still compelled to admit that its etiology and pathology are matters more of theory than of absolute knowledge.

This disease is to be differentiated from rickets, in that rickets is a congenital condition, or one occurring in early childhood, during bone development, while osteomalacia exists generally in adult life after many years of normal activity. It is to be distinguished from osteomyelitis in that the latter consists of an inflammation of the medullary portion of the bone substance and is attended with marked constitutional symptoms, generally traumatic in its origin, and does not result in the deformity peculiar to the former.

In the case under treatment at the present time, the patient is a widow woman of fifty-five years, mother of two children, thirty-four and twenty-six years ago. No history of specific disease; the menopause took place at the age of forty-nine, suddenly, and without any attending ill-health, and she enjoyed a fair degree of health up to two years ago, when she began to suffer migratory pains, intermittent in character, unattended with febrile symptoms or evidence of local lesions, and as it seemed at times, to affect only the superficial muscles, or groups of muscles, at other times to follow the course of the nerve trunks, as the great sciatic, it was diagnosed as muscular rheumatism or neuralgia, as the individual attacks seemed to indicate, and treated accordingly; yet with indifferent, or only temporary results.

Each succeeding attack seemed more and more persistent, and less and less influenced by therapeutic measures, until the patient, almost despairing of help, concluded to try a change of climate, hoping that the dry inland desert climate might prove beneficial. She accordingly went to Johannesburg, California, where she remained for a period of several months. Here her symptoms became more and more intense, until she was compelled to keep her bed and resort almost constantly to anodyne treatment, the pain now confining itself to the right femur, lower third, involving the knee.

After weeks of intense suffering, she was removed on a cot to Los Angeles and admitted to the California Hospital, Dr. George L. Cole taking charge of the case. Soon after entering the hospital it was observed that the right femur presented an anterior curvature, and was capable of considerable motion at the seat of deformity. At this time a number of surgeons were called in consultation and a skiagraph was taken of the femur by Dr. A. Soiland, which I here produce for your inspection.

Skiagraph of Femur.

*Read before the Santa Barbara County Medical Society.

The femur was then drawn down to its normal position and a plaster cast applied. Some weeks later she returned to Santa Barbara and came directly under my professional care at the Cottage Hospital. The cast was worn for a period of two and a half months, and removed; the bone in the meantime having become sufficiently solid to maintain its position, and resist muscular contraction, but presenting a considerable degree of enlargement from the juncture of the middle and lower third, to the knee.

A posterior moulded felt splint was employed for some time thereafter as a safeguard to the bone, when the patient was moved to and from the wheel-chair. For the past four months, very little pain has existed in this bone, which for a time bore the brunt of the disease, but the bones of the left pelvis have shown signs of degenerative change, by tenderness, pain, and swelling over the left sacroiliac juncture, compelling the patient to lie upon the right side continually; the pains migrating from the sacrum to the left femur and to the left fibular region, often appearing suddenly and intensely after many hours of comparative ease.

During these months of suffering there has been a constant loss of weight, until the patient has become very greatly emaciated. The digestive organs have been greatly impaired, nausea and vomiting often interfering with nutrition for days, and the treatment has been symptomatic and palliative, consisting largely in an effort to keep the nutritive powers up to the highest possible standard, and secure rest to the patient as far as possible without resort to morphia, save at intervals of several days when all other remedies failed to relieve.

The prognosis in this case, as in a great majority of these cases existing in the non-puerperal female, is unfavorable.

FRACTURES OF THE ANATOMICAL NECK OF THE HUMERUS WITH REPORT OF A CASE.*

By T. L. LOOFBURROW, M. D., Eureka.

FRACTURES of the head and anatomical neck of the humerus are usually met with in children, no doubt due to the epiphyseal cartilaginous union existing in these parts in childhood; while in the adult fractures of the surgical neck are more common. However, fractures of the anatomical neck are sometimes met with, and are almost invariably due to direct violence. The diagnosis of these fractures is sometimes very difficult except by the aid of the fluoroscope, and even then the cartilaginous union existing in childhood may lead us to a wrong conclusion.

It is a well known fact that impaction of the fragments in fractures of the anatomical neck may and often does occur; we should therefore be very careful in using force or extended manipulation in determining the character of the injury, it being a much safer plan to treat all such injuries, when in doubt, as fractures. Fractures in this locality, as usually met with, are transverse in character, but when impaction occurs we generally have also a longitudinal fracture.

My experience with fractures of the anatomical neck, although limited, is that when impaction occurs union is the rule, and a very useful arm the result, while without impaction, absorption or necrosis of the detached head frequently occurs; union being the rule, however, if the head has been restored to and retained in its proper place on the shaft.

In the treatment, the head of the bone, by careful manipulation, is restored to its proper place, a well fitting axillary pad is applied to prevent the head slipping inward, the whole arm bandaged from the fingers upward to prevent edema, the elbow supported by a bandage which also confines it to the side and a little back of the axillary line and finally a well fitting shoulder cap made of leather, wood-fibre or any material preferred. Frequent passive motion of the elbow, wrist, and fingers should be begun early to prevent stiffening of these joints, but the shoulder should be kept securely immobilized and the bandages continued for at least 5 or 6 weeks, then the cap may be removed and gentle massage and slight passive motion employed daily, re-applying the cap and bandages for at least 2 weeks longer when the elbow may be freed, and voluntary movements begun in about 8 weeks.

*Read before the Humboldt County Medical Society.

The after-effects of these injuries are often very discouraging to the patient, because of the slow, restoration of function, constant aching pain, worse at night and upon the approach of storms, which condition exists for weeks after the apparent union of the fracture. This condition in my experience is best relieved by the use of hot-air, massage, or mechanical vibration and galvanism. Should the patient give a history of rheumatism, a graduated alkaline medication will assist very materially in restoration of function. The case which I wish to report at this time has been of particular interest to me, not only because of the unique way in which the injury was received, but the complications which followed and the result obtained by treatment.

On the 2nd day of September, 1904, Mr. C. B., aged 35 years and very muscular, called at my office with his right arm in a sling complaining of considerable pain in his shoulder. Upon inquiry I elicited the following history: On or about the 1st of January, 1904, the patient, while driving a bunch of cattle across a mountain stream, attempted to throw a good sized rock far out into the water to turn a rebellious steer which was swimming down stream, and in making the effort something appeared to give away in his shoulder and his arm dropped to his side, causing him intense suffering in the shoulder. He immediately went home and in a few days was examined by a physician, who, not being able to detect crepitation, gave it as his opinion that the shoulder was merely sprained and recommended hot fomentations with arnica. The patient seemed to improve slowly until at the end of two months he was able to do some work about the shop, he being a blacksmith by trade.

A few days later while carrying a 5-gallon can of oil he shifted the can to his injured arm, when something again gave away in his shoulder and he was unable to use the arm afterward without causing intense suffering. From that time up to the time he called at my office he suffered a constant aching in the shoulder, worse at night, in fact had not had a good night's rest for 8 months.

He was anesthetized and upon examination I detected crepitation, when I formed the opinion that he had a fracture of the surgical neck and advised him to go to the hospital and undergo an operation for its relief, explaining to him, however, that on account of the age and location of the fracture, caries of the head of the bone might be present and if so currettage or resection would be necessary. Some of his friends not being satisfied requested that an X-ray picture be taken. Nine different exposures were made but the results were not satisfactory; he therefore entered the hospital on September 19th, was prepared in the usual way and at 9 A. M. on the 20th was anesthetized and an incision made extending from the acromion process directly down the arm parallel with the fibres of the deltoid for a distance of 8 inches, the tissues divided to the bone, when the fracture was found to be infracapsular, the capsule being intact. An incision was made through it and about eight ounces of disorganized tissue turned out, the end of the shaft of the bone being in a necrosed condition, the periosteum was stripped off and the bone divided with a chain saw at a point about 5 inches down the shaft. The capsule and what remained of the head of the bone were carefully desected out and the cavity irrigated with 1 to 3000 bichloride solution, drainage provided at the deepest portion, which was behind and to the outer side of the end of the bone, and a second tube inserted at the anterior and lower angle of the incision. The wound was then closed throughout with cat-gut and dressed with gauze pads, the forearm being bandaged across the abdomen. The application of rubber tubing in the axilla and over the clavicle and scapula made the operation practically bloodless; the patient was returned to the ward in a good condition.

The temperature being normal and the patient in good spirits the dressing was not disturbed until the morning of the 4th day when the wound was irrigated with lysol solution and redressed as before. This was repeated daily until the morning of the 7th day, when the arm was found to be somewhat swollen and angry looking, the patient complaining of some pain and restlessness. The temperature being 100°, the wound was irrigated with hot acetozone solution and a hot bichloride compress applied. In the evening of the same day the nurse phoned me that the patient's temperature was 104° and he appeared very nervous. I immediately called, removed the dressing and found the arm greatly swollen and edematous. Believing there must be a pus cavity, I removed a few stitches and opened the wound to the bone when a large quantity of pus escaped. The wound was left open and irrigated with a hot acetozone solution and a hot compress of the same solution covered with rubber-tissue applied to the arm. The next morning the temperature had dropped to normal and the swelling much reduced. This treatment was continued for the next 3 weeks when the patient was able to leave the hospital and report at the office for dressing. Six weeks after the operation the wound was healed throughout and the patient was contemplating going home when one night, a week later, he was attacked with a heavy chill and when he called at the office the next

morning I discovered fluctuation in the line of incision and being satisfied that the end of the bone had again broken down I sent him back to the hospital and a second operation was done. At this time all the diseased tissue that could be found was removed, the wound left open, and the cavity packed with iodoform gauze.

The patient rallied nicely and everything seemed to be progressing favorably until the morning of the 3rd day when he suffered a severe chill. I therefore removed the dressing, irrigated and repacked the wound, which by the way appeared to be doing nicely and I was unable to account for the chill. The patient passed a very restless night and the next morning upon removing the dressing I discovered an irruption on his shoulder resembling erysipelas, the temperature being at this time 105°. In the afternoon of the same day Dr. Felt saw the patient with me and was satisfied that erysipelas had developed. He was immediately put on iron and quinine, his bowels moved thoroughly and the irruption covered with an ointment of icthyol and resorcin and covered with oil-silk.

The irruption gradually spread in spite of caustics and hypodermics of carbolic acid around the infected area, until the whole back and down to his knees was involved. The irruption slowly disappeared from above as it spread downward, and the temperature ranged between 101° and 106° until the 14th day of its appearance, when the temperature gradually came down. At the end of the 3rd week the temperature was normal and the irruption had disappeared; the arm in the meantime appeared to do very nicely.

Three days after the disappearance of the irruption from the body, an irruption appeared on the arm in a pustular form, spreading gradually around the limb, this was treated as the other, with the exception that the pustules were cleansed with peroxide. This disappeared in 6 days, leaving the arm pitted as in variola.

From this time on the patient improved rapidly until 6 weeks after the second operation the arm was healed throughout and the patient returned to his home in the mountains very much improved in health, free from all pain, with almost perfect use of the hand and forearm and able to move the arm backward and forward and about 6 inches from the body. Could feed himself very handily and write letters.

A DEFENDER OF SECRET NOSTRUMS.

Last week we were favored by several manufacturing pharmacists with a copy of a letter they had received from the owners of the *New York Medical Journal*. The letter was practically the same in each instance, and evidently was sent to a large number of advertisers (but not to physicians, however, so far as we know). The letter is so unique that we reproduce it (Exhibit A)—not because there is any criticism on a journal asking for opinions of manufacturing pharmacists (for we publish above some opinions which the council itself solicited) but because the owners and not the editor ask for the opinions and because of the suggestions made as to the kind of opinions wanted. It is very much to the point that this letter was sent by the owners and not by the editor of a journal that is presumed to be published in the interest of physicians. Just why the editor's function was usurped by the owners of the journal we cannot understand, but we can readily appreciate why the advertiser's side of the question was recognized as the more important, when we realize that the owners are primarily advertising agents and publish a medical journal as a side line. As evidence of their status we reproduce the letterhead of the firm (Exhibit B). As a further reason for the *pro tempore* editors siding with the advertisers, it should be known that they also own a drug journal, which at one time was recognized as a high-class pharmaceutical publication. Under the present management, however, it has developed a decided leaning toward patent medicine and the Proprietors' Association, and is not pointed out as an exponent of the highest ideals in pharmacy. Furthermore, the owners, as far as we know, do not claim to be pharmacists, and we never heard that they posed as physicians; consequently when they assume to edit a medical journal they are not to blame if they do not see either the scientific pharmacist's side of the question, or the physician's. Then, again, there is more money in a journal with a small circulation and with a large advertising patronage than the reverse, and in such cases it may pay from a financial standpoint to cater to the advertisers. Therefore, taking it all in all, it can be readily understood why the temporary editors temporarily forgot that they were temporarily acting as editors of a journal that, nominally at least, represents physicians and not secret nostrum manufacturers.

There was a time when the *New York Medical Journal* held a high position among medical journals of this country. It stood for the ideal in medicine and for the profession it represented. But that was when it was owned by the Appletons; when Dr. Frank P. Foster was editor in fact, and who, as such, would not have advocated in its editorial pages secrecy in medicine.—*Journal A. M. A., March 25, 1905.*

NEW YORK MEDICAL JOURNAL
AND PHILADELPHIA MEDICAL JOURNAL
A. R. ELLIOTT PUBLISHING CO.
66 West Broadway, N. Y.

New York, March 14, 1905.

Chicago, Ill.

Gentlemen:

Regarding the recent action of the American Medical Association we beg to say:—

Most sane persons are disposed to regard the personal property which their exertions have created as peculiarly their own; and any suggestion that they part with it would probably be treated with derision.

This seems, in essence, to be what the American Medical Association demands in its new rules about proprietary preparations. To comply with the new requirements would be to make your products common property. By furnishing the information demanded you would enable pirates to affirm that their spurious imitations were made in accordance with the published formulas of the association.

Refusal to be mandamused out of your property will result in the exclusion of your advertisement from the association's journal. Also it will exclude you from the proposed book of non-official remedies. Very many others will be excluded for the same reason, and the book consequently will be incomplete.

We therefore offer you space in the New York Medical Journal for a brief expression of your views on this important matter, and shall be very glad to hear from you at your earliest convenience. Very respectfully yours,

A. R. ELLIOTT, President.

(Exhibit A.)

Advertising is to Business what Steam is to Machinery—The Great Propelling Power.—*Lord Macaulay.*

A. R. ELLIOTT—Advertising

Leading Dailies a Specialty

Religious Weeklies	Trade Journals	Country Weeklies
Medical Journals	Illustrated Papers	Juvenile Publications
Fashion Publications	Agricultural Journals	Foreign Publications

Monthly Magazines

I point YOU out to the PUBLIC

62 to 68 West Broadway, N. Y.

(Exhibit B.)

Druggists' Working Time Limited.

At the last session of the legislature a bill was passed, subsequently signed by the Governor, limiting the hours of employment of those who mix and sell drugs. A maximum of 10 hours per day, or 60 hours in any 6 consecutive days, is fixed as the limit, and the penalty for violation is a fine of not less than $20.00 nor more than $50.00; or imprisonment for not exceeding 60 days; or both. The bill seems to have been prepared in conference between the association of druggists and the association of clerks, and is apparently a good law.

Annual Meeting of the American Proctologic Society.

The seventh annual meeting of the American Proctologic Society will be held at Pittsburgh, Pa., May 5th and 6th. The Hotel Henry has been selected as the place of meeting. The names of men prominent in the profession appear upon the program, which undoubtedly will be a good one.

PUBLICATIONS.

The Ophthalmic Year-Book. A Digest of the Literature of Ophthalmology with index of publications for the year 1903.—By EDWARD JACKSON, A. M., M.D. The Herrick Book and Stationery Company, Denver, Colorado. Price, $2.00 net to dealers, single copies $2.00, less 10%, express charges paid.

The Ophthalmic Year-Book by Edward Jackson is, as he states, a digest of the literature of Ophthalmology with an index of publications for the year 1903. He considers many subjects relative to the eye in their most recent conceptions, quoting from valuable contributions and weighing a number of matters, from his own standpoint, which gives the work an individuality aside from its being a mere review.

It can hardly be termed a book of reference but should be read from cover to cover by every oculist as an interesting and up-to-date discourse. It is almost too technical in its detail for the medical student or general practitioner. L. C. D.

Another Illegal Practitioner Gone.

Dr. Chas. L. Tisdale, Secy.,
San Francisco, Calif.,

Dear Doctor:—Doctor Wm. A. Anderson, who began practice in Imperial over a year ago, was arrested here on March 17th for practicing medicine without a State's License. He was taken to Brawley for his preliminary hearing before Justice Holloway, was ordered under $500 bonds and had his trial set for the following Monday.

He was brought back to Imperial Friday night by Officer Meadows, but in the early morning hours effected his escape. He was traced to Mexicala—just across the line in Old Mexico—where he enjoyed such freedom as fugitives from justice can find on alien soil. It was of short duration, however, for on Sunday night he was lured across the boundary line, was recaptured and taken to Brawley.

Before the hour set for his trial he again made his escape and took to the tall grass for good. What became of him is still an open question—the only thing known for certainty is that he has not shown up in this vicinity since that time. The doctor had come from Georgia, ostensibly for his health, but probably decided that the climate of Southern California was too warm for comfort.

It would no doubt be of interest to the other members of the profession in the State to know of this instance—perhaps a word to one of the leading medical journals would suffice. Very truly,

March 27, '05. F. J. BOLD.

Appointments by the Governor.

On the night of March 9th, the last night session of the Legislature, the Senate was in turmoil. Visitors were in plenty, and they were all over the shop, talking, laughing, jesting, with grave senators and jocular pages; some senators were passing the merry jest with pretty stenographers for the last time of the 36th session. So great was the noise and confusion that the President of the Senate was rapidly being worn out in his efforts to preserve sufficient order to enable the clerk to call the roll for the final passage of bills—the work for which the senators were elected and for which they are paid. Suddenly there appeared a messenger from the Governor announcing appointments, and the change from storm to calm was marvelous! Out of chaos came order, at the magic word, "patronage"! The scene would have been intensely amusing if it had not indicated a phase of politics that is disgusting.

It is a pleasure to note the appointment of the following members of the Society to the positions indicated:

Dr. Walter Lindley of Los Angeles to be a member of the Board of Trustees of the Whittier State School, vice self, term expired.

Dr. Martin Regensburger of San Francisco to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. F. K. Ainsworth of San Francisco to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. A. C. Hart of Sacramento to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. O. Stansbury of Chico to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. Wallace A. Briggs of Sacramento to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. N. K. Foster of Oakland to be a member of the State Board of Health, vice self, at expiration of present term, March 29, 1905.

Dr. W. LeMoyne Wills of Los Angeles to be a member of the State Board of Health, vise self, at expiration of present term, March 29, 1905.

San Francisco Society of Eye, Ear, Nose and Throat Surgeons.

At the last meeting of the Society of Eye, Ear, Nose and Throat Surgeons, a committee was appointed for the purpose of collecting, among its members, an Ophthalmologic exhibit to be sent to the A. M. A. meeting in Portland this summer.

To make this exhibit one which we will be proud of, it will be necessary for each member to take it upon himself to contribute or assist in procuring material. We desire photographs of anything, pertaining directly or indirectly to the subject, original, modified and new apparatus or instruments, pathological specimens, microscopical slides, etc.

This card is addressed to each member with the earnest request that an answer be returned whether you will be able, or not, to contribute something. Any suggestions that you may make will be appreciated.

Address all communications to Louis C. Deane, 606 Sutter Street., San Francisco.

Respectfully yours,
KASPAR PISCHEL
ADOLPH BARKAN
GEO. BRADY
LOUIS C. DEANE
Committee.

Another Illegal Practitioner Convicted.

A short time ago the JOURNAL received information that a "Dr." Hollister who had for some time been practicing at Halfmoon Bay, San Mateo County, was arrested, tried, convicted and fined $250. This is merely an illustration of what may be done if the physicians of the State, and particularly the County Medical Societies, will devote a little time and energy to the prosecution of this very important matter. Certainly the gentlemen in San Mateo County are to be sincerely congratulated upon their good work.

"Dr." Arons: Information Wanted.

The Secretary has received a request for information as to the whereabouts of a man known as "Dr." W. C. Arons. In all probability he will be advertising extensively, if he is located in the State. He holds himself out to be a "bone setter," and any member of the Society knowing of his whereabouts will confer a favor upon the Secretary by advising him of that fact.

Meeting of Texas State Board of Medical Examiners.

The Board of Medical Examiners for the State of Texas (Regular) will hold its next meeting in Austin, Texas, May 2nd, 3d, 4th and 5th, 1905, for the examination of applicants and transaction of other business. For further information address the secretary. J. T. Wilson, President, Sherman, Tex.; M. M. Smith, Secretary, Austin, Tex.

COUNTY SOCIETIES.

Alameda County.

Following its most excellent custom of previous years, the Alameda County Medical Society gave a dinner, on the evening of April 8th, and invited the officers of the State Society to be its guests. The special feature this year, was that the dinner was given to Dr. Frank Adams, the retiring president of the State Society. Good cheer and good fellowship were the only topics permitted discussion, under the rules, and they were well discussed. Dr. Ewer, president of the County Society, presided in a most happy vein. He first introduced the recently elected mayor, Mr. Mott, who was followed by General Girard, Dr. F. B. Carpenter, an ex-president of the State Society, P. M. Jones, C. G. Kenyon, and others; at that point the San Francisco delegation was forced to tear itself away and catch the last boat.

Orange County.

The Orange County Medical Association met in regular session Tuesday evening, April 4th. There was a good attendance; in fact our attendance is on all occasions as good as could be expected. We have 21 members and have an average attendance of 10. There was no regular paper, the time being taken in reports of cases and election of officers.

The following officers were elected for the ensuing year: President, Dr. J. W. Jones of Orange; Vice-President, Dr. Geo. H. Dobson of Santa Ana; Secretary, Dr. H. S. Gordon, Santa Ana; Treasurer, Dr. C. D. Ball, Santa Ana; Librarian, Dr. John L. Dryer, Santa Ana; Delegate to the State Society, Dr. C. D. Ball; Alternate, Dr. F. M. Bruner.

H. S. GORDON, Secretary.

Humboldt County.

The annual meeting of the Humboldt County Medical Society was held in the banquet room of the Needs Building, March 14, 1905, President McKinnon presiding. Drs. Foster, Bryan and Chain of Eureka, and Dr. Cottrell of Fortuna were elected to membership. A vote of thanks was extended to Gov. Pardee for vetoing the Anti-vaccination Bill. It was also decided to send a telegram to the Governor asking him to sign the bill appropriating $150,000 for a State Hospital for the tuberculous poor, but at a later hour it was reported that the bill had already been vetoed and the message was not sent. The secretary's report was read showing a balance of $48.45 in the treasury, and a membership of thirty-nine (39), being practically all the eligible practitioners in the county.

Amendments to the By-Laws, changing the time of the annual meeting from March to January, and raising the annual dues from three to five dollars, were adopted. The change in dues does not become effective until the next annual meeting.

The following officers were elected for the ensuing year: President, Dr. O. W. Sinclair; Vice-President, Dr. G. N. Drysdale; Secretary, Dr. J. H. Mallery; Treasurer, Dr. C. O. Falk; all of Eureka. Delegates, Dr. F. R. Horel of Arcata, one year, and Dr. C. O. Falk of Eureka, two years. Alternates, Dr. J. A. McNaughton of Blue Lake and Dr. G. N. Drysdale of Eureka.

The President appointed the following committees: Program and Scientific Work, Drs. Mallery, Mills and McKibbon; Public Health and Legislation, Drs. Foster, Pryor and C. C. Falk; Entertainment, Drs. Dorias, Loofbourrow and Felt.

Dr. Horel of Arcata read a paper on "Uterine Fibroids Complicating Pregnancy" which was listened to with much interest and was discussed by Drs. C. C. Falk, C. O. Falk, Drysdale, Felt, Sinclair and Horel. Dr. Mallery of Eureka read a paper entitled "A Plea for the Druggist," which was discussed by Drs. Horel, Drysdale, McNaughton, Pryor, McKinnon and P. M. Menefee. Both papers have been sent to the STATE JOURNAL.

Dr. P. M. Menefee of Arcata presented a very interesting case of melanosarcoma of the back, which was examined and discussed by the members generally.

After some general discussion the meeting adjourned in a body to the banquet table, where a very appetizing lunch had been prepared, and the balance of the evening was spent in speeches, stories and paying attention to the repast.

J. H. MALLERY, Secretary.

Ventura County.

The quarterly meeting of the Ventura County Medical Society was held at the residence of Dr. D. W. Mott, Santa Paula. Dr. Mott was the orator, his subject being, "Surgical Emergencies." The subject, as treated by Dr. Mott, was most exhaustively demonstrated, the very latest technic, and resources of the entire surgical domain being elucidated, apposite cases in the author's wide experience as a surgeon being referred to frequently.

The members voted the meeting a success, and extended the thanks of the Society to Dr. Mott.

After the intellectual feast came the feast prepared by Mrs. Mott, the genial hostess, and the viands would have made Lucullus envy the V. C. M. S.

CHARLES TEUBNER, Secretary.

MEDICAL SOCIETIES.

The California Academy of Medicine.

Regular meeting, held February 28, 1905, the President, Dr. Dudley Tait, being in the chair.

Operation for Tuberculosis of a Metacarpal Bone. Dr. Dudley Tait exhibited a patient who had had a tuberculosis of the metacarpal bone of the index finger, the nature of which had been demonstrated before operation by means of an X-ray plate. The diseased bone was excised and a piece of radius was transplanted to take its place. The disease has been eradicated, and the functional result has been fair, the main trouble being that the graft is already somewhat too short and seems to be shortening still more.

Demonstration of X-ray Plates. Dr. Lehmann exhibited a number of X-ray plates, among which was one showing a tumor in the brain. The diagnosis was confirmed at autopsy. Another plate showed several small, dense, sharply outlined spots in the lungs. These were believed to be caused by lung stones. A third plate demonstrated very clearly a number of bronchiectatic cavities in the lungs of a child. Two plates were exhibited of the fourth case. The first showed a large oval shadow in the chest, well above the diaphragm, while the second plate, taken some time later, showed a shadow like that produced by fluid in the pleural cavity. It was believed that when the first plate was taken the patient had had a collection of fluid between the lobes of his lungs, and that this had later ruptured into the pleural cavity, thus giving rise to a pleuritic effusion.

Two Unusual Cases of Gastric Carcinoma. Dr. W. F. Cheney reported two cases of gastric carcinoma, which were interesting because they produced no symptoms referable to the stomach. In the one, a large nodular liver gave rise to the suspicion that the patient had syphilis and later to the diagnosis of carcinoma of the liver. In the other, a large tender mass in the region of the spleen proved at autopsy to be a perigastric abscess. Neither patient had vomited nor had had any other symptom referable directly to the stomach. In both cases, the carcinoma was situated in the fundus.

Drs. Geo. Gross and C. H. Cooper referred to the test for occult blood in the stools as one which might have been of value in these cases.

Dr. J. H. Barbat has seen a case of perigastric abscess. He recommends early operation on cases in which even a fair suspicion of carcinoma of the stomach is present.

Dr. A. W. Hewlett suggested that the reason that so few gastric symptoms were present in these cases was that the carcinomata had not produced an obstruction. The occult bleedings may occur, not only from carcinomata but from ulcers of the stomach or intestines and even from dilated stomachs.

Dr. Cheney stated that great care must be taken with the diet before placing any reliance upon the tests for occult bleedings, since the blood may come from the food eaten. He also believed that an exploratory operation should be done whenever a fair suspicion of carcinoma of the stomach exists.

Bicornate Uterus. Dr. Geo. Somers reported two cases of bicornate uterus. In one the condition was suspected from the fact that on curettement the instrument passed into two distinct sacs at the apex of the uterus. Removal of the uterus for disease of the appendages confirmed this suspicion. In the second case, the diagnosis of myomata was made and operations showed two uterine bodies united below into one cervix. The history of this patient is of interest, firstly because she menstruated about twice a month ever since the birth of her first child, and secondly, because the second pregnancy seemed to be different from the first. She enlarged distinctly to the left side, she suffered from considerable pain, and the pregnancy was terminated by a still birth at term. Apparently the right uterus was impregnated in the case of the first child and the left in the case of the second.

Intestinal Obstruction from Meckel's Diverticulum. Dr. Emmet Rixford demonstrated a Meckel's diverticulum which had been the cause of an intestinal obstruction in a child. The diverticulum had attached to it a piece of fibrous tissue resembling a mesentery.

A. W. HEWLETT, Secretary.

Redlands Medical Society.

The March meeting of the Redlands Medical Society was held in the Y. M. C. A. parlors in Redlands on the afternoon of the 15th inst. There was a full attendance of members. Among the visitors were Drs. M. M. Hooton and H. M. Haskell, of Redlands; Dr. J. W. Wilson, of Iowa; Dr. W. R. Davidson, of Indianapolis, Ind.; Dr. C. H. Alden, U. S. A. (retired), and Dr. R. S. Gibbs, of San Bernardino. After the reading of the minutes of the last previous meeting, the President, Dr. Sanborn, called attention to the fact that the third Wednesday in April, the date for the next meeting of the Society, would fall on the 19th, on which date the State Medical Society would be in session in Riverside. Accordingly, a motion to postpone the April meeting until the date of the next regular meeting was adopted. The name of Dr. H. M. Haskell was proposed for membership and was referred to the Board of Censors.

The paper of the day was by Dr. Hoell Tyler, his subject being "Heredity and Continuity of Life." This was a carefully prepared and interesting essay, dealing with the theme mainly from the standpoint of cytology. A general discussion ensued, after which the Society adopted a motion expressing its desire that the paper be published.

Dr. Tyler exhibited a male patient, about 50 years of age, suffering from pulmonary tuberculosis, in whom there was also enlargement of the liver, with symptoms of biliary and portal obstruction. The case was examined and was commented on by most of those present, some expressing the opinion that the abdominal conditions were secondary to the pulmonary tuberculosis, while others thought that malignant disease or hypertrophic cirrhosis of the liver was the primary trouble in the abdomen.

Dr. Tyler also reported the case of a female patient, 59 years of age, who had died of an obscure ailment. A postmortem examination disclosed no adequate cause of death unless it might be a peculiar, hard capsulated tumor, a little smaller than a baseball, apparently springing from the peritoneum between the spleen and the left kidney. The tumor was examined microscopically and reported to be a spindle-cell sarcoma.

WM. A. TALTAVALL, Secretary.

COMMUNICATIONS.

Cheap Insurance Examinations.

To the Editor of the STATE JOURNAL:—I should be glad if you would kindly mention in the JOURNAL that Placer County is out against the New York Life and kindred companies who only allow $3 for examinations. At present the above said companies have no examiners in Placer and Nevada and are now talking of importing an examiner from the outside. This, of course, we cannot prevent. But the members of the Society here have made a firm stand against the $3 examination and desire the support of other medical societies. Dr. R. A. Peers of Colfax has refused to examine applicants, and Auburn is without an examiner. Dr. Peers and the Medical Society do not object to any physician coming to Colfax to examine for the New York Life provided that the physician charges mileage and the prescribed fee of five dollars.

The thin end of the wedge has entered and the Society proposes to drive home the thick end. To do this we require the aid of all members of the State Medical Society and the best aid they can give us is to refuse to come to Placer and Nevada Counties under the prescribed fee of five dollars and mileage.

Truly yours,
J. H. MULES,
Sec. Placer Co. Medical Society.

Necessary Work in Politics.

To the Editor of the STATE JOURNAL:—Relating to your editorial "Thank God" in April issue of CALIFORNIA STATE JOURNAL OF MEDICINE you say "let us be thankful, that we do *not* have to be watchful for another two years," etc. Now that is just where we make a mistake; the wily politician works all the time while the self-complacent citizen sits idly by, and without any effort on his part to prevent, sees some of the worst men possible sent to the legislature, and after they get there, the above mentioned citizen simply gets up and howls.

A doctor particularly yields a wide-spread influence, and would he only exert it, at a time when it would do the most good, "at the primaries," the glow of satisfaction, at having done his duty to his state, would be sufficient recompense and not the least hurtful to his dignity and reputation.

I took occasion not long ago to demonstrate this to my own satisfaction, and was simply amazed at the good results. Yours fraternally,

April 5, 1905. WM. HIMMELSBACH.

Ample Cause for Death!—Upon inquiring into the circumstances of a death the following reply was received: "The cause was Brain fever. It set in 28 hour after delivery mildly but in 48 hour had assumed gigantic proportions. Partial Paraphegin of Brain, Bowels and womb. the inerSide of womb was so great that it Resided down but very little up to her Death. Profound Como or Stupur was Present all the time after Spinal fever set in. the Prognosis was unfavorable with us almost from the beginning. There was no Lochia discharge after third day."—*Am. Medicine.*

CALIFORNIA: SOME WORDS OF TRUTH.

For the healing of the "ills to which flesh is heir," California has over two hundred mineral springs of known excellence, and health resorts too numerous to be here even catalogued. They are distributed over the whole State and under climatic conditions so beneficent and so general as to make the State itself a health resort. The serene skies and atmospheric peace; the absence of "winter and rough weather"; the dry air of the cloudless summers; the breath of pine forests that are never damp, and the salt air of a sea whose habit is not stormy, have made California a Land of Health. No other country in the world with such range of latitude can show such climatic unity. There is a sea climate and a land climate, but save as modified by nearness to the ocean or by elevation in the mountains, the climate of the State is one. Lines of latitude hardly count. Oranges ripen in the upper Sacramento valley as finely as in the groves of San Diego, 600 miles south; and the summer sojourner about Lake Tahoe or Mount Shasta finds the same temperature that he would find at a like elevation in the mountains of Southern California.

And not even the countries which border the Mediterranean, where the same physical causes operate to produce a genial air, can show winters so mild, or summers so dry, or so free from cold and irritating or hot and enervating winds, as in California. Winter shows a green world, and makes all the land save in the high mountains a miracle of color. There are rainy days and days of storm, but there are weeks of sunshine, and sunshine when it comes is not an intermittent escape from objecting clouds. The skies are blue, the atmosphere cleansed and all the air radiant, equable, hygienic, rejuvenating. Summer is everywhere dry, and though in the interior it may be hot at noon, the absence of moisture produces a rapid evaporation, reduces bodily temperature, and makes sunstroke a thing unknown. Then, too, the dry atmosphere provides for rapid radiation from the surface of the earth at night, quickly dissipates the heat of the day, and insures cool and refreshing hours for sleep.—A. J. WELLS.

* * * *

California cannot be measured by the same yardstick with which we measure other states and countries of the world. Whoever attempts to do such a thing will soon find himself at a loss as to how he shall proceed, and will finally come to the conclusion that here is a land distinct and apart from all others—one that must be judged entirely by itself. In its climate, its products, and in nearly everything else, California stands apart. Even in its transportation facilities this "Land beyond the West" is altogether unlike any other state.

The traveler in California will not only find many of the best features known to transportation anywhere, but he may also enjoy more unique and interesting features than he will be able to find in any other state in the Union. Not alone may he traverse the valleys in the luxurious cars of transcontinental flyers, but he may travel on scenic roads that wind picturesquely up rugged mountains; he may make memorable trips through dark redwood forests on rushing lumber trains; speed over the smooth waterways on fine steamers, or go down to cities by the sea on swiftly flying electric cars.

Within a few miles of San Francisco the traveler will find a most interesting bit of railroading. The Mount Tamalpais Scenic Railway is famous as "the crookedest railroad in the world," and it deserves its title. Winding up to the mountain's crest, from which splendid views may be had of all the surrounding country—the harbor of San Francisco, the city and its environs—this railroad makes such a lot of bewildering turns that the traveler cannot help but realize that here is something distinctly out of the usual. Then there is the road up Mount Lowe, but a short distance from Los Angeles, which takes one up a steep incline, more as a "lift" than as a railway, to the Swift Observatory and Alpine Tavern, thousands of feet above sea level. The famous Tehachapi Loop of the Southern Pacific Company is still another interesting feature in railroading to interest the traveler.

But travel in the Golden State is not confined to rail. California has particularly fine waterways. The San Joaquin and Sacramento rivers drain the greater portion of the State, the latter being open to navigation for a distance of two hundred miles. The Bay of San Francisco is one of the largest and finest in the world, and all sorts of craft plough its waters.

Staging in California is not today what it was years ago, before the shining steel of the railroads was laid up and down the broad valleys and over the mountains. Yet even now the traveler may experience something of that which made the glory of the "other day." The most famous stage lines in California, and perhaps in the world, are those from Raymond and Merced to the Yosemite Valley. One there finds the good old-time stage coaches, the dashing teams and the skillful drivers told of in the narratives of other times. The stage roads are oiled during the summer season, and a ride over them is counted one of the finest trips in the State. Raymond is the Southern Pacific's route to the great valley, the Santa Fe reaching Yosemite from Merced by an interesting stage line which passes en route the Merced big trees.

All these things give piquancy to travel in California, and make the traveler realize that the State is unique even in its transportation.

The traveler who comes to California by rail has a wide choice of routes. The Atchison, Topeka & Santa Fe Railroad enters the State at its southern door. The Grand Canyon of Arizona, the cliff dwellings and the petrified forests are on the line of this railroad, and are so much a part of the sight-seeing of a California trip that they may be properly mentioned in this article, although they occur a little before crossing the California line.

The Southern Pacific Company reaches the State by three routes. The Shasta route enters California from Portland, Oregon, across the Siskiyou mountains, through some of the finest scenery in the world. Indeed, this is a great scenic route, and many a traveler has looked out upon the heavily-wooded mountains and the dark gorges, and felt his heart stir within him long before the train, rushing down toward the sunny valley of the Sacramento, bore him into view of hoary, majestic Mount Shasta. The Ogden route brings one into the State across the Sierra Nevadas, through a wonderland of grand views, from Lookout Mountain to famous Cape Horn. The Sunset route comes in from New Orleans via Yuma, through the same great southern gateway utilized by the Santa Fe. Both companies afford the traveler everything that is up to date and luxurious, and their trains are reckoned among the finest in the world. At one time it was a long distance from the East to California, but today it does not seem so far. The trip that took the pioneers so long to make "across the plains" is now but a matter of hours. Three days from Chicago will land one at San Francisco.

California has an area in square miles larger than the combined areas of New York, New Jersey, Vermont, Maine, New Hampshire, Connecticut, Ohio and Massachusetts. There are thirty-five steam roads operating in the State today, with a total mileage of about six thousand. Many of these are held by lease or otherwise, so that they form part of the two principal railroads of California—the Southern Pacific and the Santa Fe. The Southern Pacific is the pioneer line, being practically California's first railroad, the present company having grown out of the Sacramento Valley road and the Central Pacific. The first railroad connecting California with the East was started at Sacramento in 1863, and was built through the rocky barriers of the Sierra Nevada mountains.

The principal railroads in California at present are the lines through the San Joaquin and Sacramento valleys, the coast lines and the lines in Southern California. These cover the greater portion of the State and afford the traveler transportation facilities to nearly every point to which he may want to go.

Let us suppose that the traveler enters California by the Shasta route. After crossing the Siskiyou mountains at the northern end of the State and passing Mount Shasta, he is brought down the canyon of the Sacramento river to the head of the great Sacramento Valley. When the traveler arrives at this point he is at the northern end of the great interior basin of California, and just about to enter one of the great agricultural sections of the State. And there at the head of the valley he will be confronted by the question of routes. The main line branches here, one branch swinging away through the rich farming country on the west side of the valley, while the other follows the course of the Sacramento river, branching again before the lower end of the valley is reached. By these lines the traveler can reach any part of the Sacramento valley, and by still other branches turn aside into the rich foothill districts. The Ogden route of the Southern Pacific comes into the Sacramento valley at its lower end, and both of these lines join it and take the traveler to San Francisco.

Both the Southern Pacific and the Santa Fe enter the San Joaquin valley at its southern extremity, coming in over the Tehachapi mountains on the same track. The former has two main lines the entire length of the valley, while the Santa Fe has two main lines for over half the distance. All the principal cities in the San Joaquin valley are connected by these lines, and there are several loop lines and branches which tap outlying sections. One of the Southern Pacific's branch lines reaches Raymond, the point at which travelers take stage for Yosemite Valley and the Big Trees. The Yosemite route of the Santa Fe is from Merced, on its main line.

Just as the rivers which drain this great interior basin turn at last and flow into San Francisco bay, so do all these various lines of railroad make their way to the western edge of the State until, broadly speaking, they enter San Francisco at the same point. The Santa Fe line terminates at Point Richmond and Oakland, and the lines of the Southern Pacific at Oakland, both places being just across the bay from San Francisco.

San Francisco being the principal city and main seaport of the Pacific Coast, constitutes the objective point for transportation lines. The traveler will find it easy to leave San Francisco in any direction which he may want to go. Besides the lines just spoken of, there are other roads which come into San Francisco. The California & Northwestern runs from San Francisco a distance of some two hundred miles northward through the fertile Sonoma and Russian River valleys, bringing the traffic of those rich sections to the metropolis. There is a coast line of the Southern Pacific system running down the San Francisco peninsula. The North Shore Railroad passes north through picturesque Marin county, and will carry the traveler to the immediate north coast. The Mount Tamalpais Scenic Railway connects with this line, and gives the traveler the unusual experience of its wonderful, winding route.

The traveler will see ships of all nations in the great harbor of San Francisco, and perhaps may note, in-coming or out-going, the great liners of the Pacific Mail, the Occidental & Oriental, or the Oceanic steamship companies, bound to or from China, Japan, Hawaiian Islands, the Philippines or Australia. Or he may note the steamers of the Pacific Coast Steamship Company, which reach all the ports of the Pacific coast, Central and South America, and Alaska. Here, too, he may see other steamers leaving San Francisco for Alaska, Cape Nome and other northern points, and may also notice on the bay the river steamers from the San Joaquin and the Sacramento. All the railroads which enter San Francisco have fine transfer steamers on the bay, so that the traveler finds no difficulty in crossing at any hour he wishes.

The traveler may go from San Francisco to Los Angeles by two routes. The Southern Pacific will take him by its coast line "the way of the missions," and either the Southern Pacific or the Santa Fe will carry him by the other route, through the San Joaquin valley. The coast line covers the country from San Francisco to Los Angeles, with many loop lines and branches, and affords the traveler a chance to visit all the important places along the coast for that distance. The main line goes south down the San Francisco peninsula, while a broadgauge and a narrowgauge line leaves Oakland and Alameda, respectively, and reach San Jose, in the heart of the Santa Clara valley, via the east side of the bay. The narrowgauge runs west to Santa Cruz, while the main line continues southward. One of the most important branch lines is the line that runs out of Castroville, reaching famous Hotel Del Monte, Monterey and Pacific Grove. From Castroville the main line takes the traveler to Paso Robles, San Luis Obispo, Santa Barbara and then to Los Angeles.

The city of Los Angeles is another objective point for transportation, and it is here that all the lines of Southern California converge. The Sunset route of the Southern Pacific comes to Los Angeles, and the Santa Fe reaches it by the Southern California Railroad, which is a part of its system. By this latter line the traveler may reach San Diego, and all that portion of the State which lies along the coast immediately south of Los Angeles. It also reaches Coronado Beach and many other famous resorts.

The Santa Fe in Southern California has many attractive trips to offer, but swinging around the "Kite-shaped track" is the one that appeals to those who desire to get a glimpse of the most characteristic scenes in the shortest time. It embraces a ride over one hundred and sixty-six miles of railway through scenes which illustrate the beauties of Southern California. It is unique in the fact that not one mile of the trip is duplicated, and at only one point, San Bernardino, where the two lines cross, is the same scene twice viewed. It begins and ends at Los Angeles, and may be traveled either going via Pasadena, returning via Orange, or vice versa. The more popular way is from Los Angeles through the Arroyo Seco to Pasadena, Santa Anita (Baldwin's ranch), Monrovia, Azusa, Upland, North Cucamonga, Rialto, San Bernardino, Redlands, Mentone, Highland and Arrowhead; Colton Riverside, Corona, Santa Ana canyon, Orange, Fullerton and La Mirada, back to Los Angeles. It can be made in a day. The drive or electric car ride either to Smiley Heights in Redlands, or down Magnolia and Victoria avenues at Riverside, will well repay any person desirous of viewing these beautiful places.

The "inside track" of the Southern Pacific covers a large portion of the country southeast of Los Angeles, and will take the traveler to Riverside, San Bernardino, Pasadena and other places in the heart of the orange district.

The San Pedro, Los Angeles & Salt Lake Railroad, the new Clark line, is only partially completed at present, but will be finished soon. This line will certainly be an important factor in the transportation development of Southern California. It will extend from San Pedro to Los Angeles, and thence across the Mojave desert to Nevada. When this line has been completed the traveler will have still another route into California.

The southeastern part of the State is reached by the Carson & Colorado Railroad, a line in the Southern Pacific system which enters at the town of Queen and runs to Keeler, on the edge of Death Valley. This line gives transportation facilities to Mono and Inyo counties, and to the Tonopah mining district of Nevada.

The traveler who goes north of San Francisco to Humboldt and Del Norte counties will find few railroads, and those principally private lines owned by lumber companies. The most important of these are the Eureka & Eel River Valley Railroad, now owned by the Santa Fe; the Arcata & Mad River Railroad, and the Eureka & Klamath Valley Railroad. The large transportation companies of California are alive to the fact that this section is a very rich one, and it will not be long before there will be many roads throughout these northern counties.

One of the things which will appeal to any traveler in California is the service afforded by electric lines. The last few years have witnessed a deal of activity in this direction. Every large city in California is now the center of a network of electric lines. To a certain extent these electric roads have revolutionized local transportation in many parts of the State. There are fine electric lines in the Santa Clara valley, and in all the most important parts of the San Joaquin and Sacramento valleys. The electric lines in and around Los Angeles give that city an unexcelled suburban service. These lines reach all the important towns near Los Angeles, and compare most favorably with the best Eastern lines. The rails and cars are heavy, and the time made is exceptionally fast. Many new lines are being built throughout California, and every existing electric railway company is constantly broadening and extending its service.

ELWYN HOFFMAN.

REGISTER CHANGES.

Those members who desire to keep their Registers corrected up to date should check this list carefully. In the following will be found all the official changes (in California) received from the 15th to the 15th.

Ballance, Wm. P., from 819 Market st., San Francisco, to 11 Fifth st., Eureka, Humboldt Co. Bold, F. J., from add. unknown to Imperial, San Diego Co. **Buchanan, Robert A.**, from 305 Larkin st. to 1436 Market st., San Francisco.

Castle, Curtis H., from Dinuba, Tulare Co., to Merced. **Clark, J. Emmet**, from M. E. Church Block to 2264 Central ave., Alameda. **Cottrell, E. L.**, from add. unknown to Fortuna, Humboldt Co. Crease, H. George, from (p. 70) Eureka, Humboldt Co., to Santa Ana, Orange Co. **Crothers, W. H.**, from 819 Market st. to 313 Parrott Bldg., San Francisco. Hours: 1:30-4 and 7-8 P. M.

Finney, Wm. N., from Sacramento to Lincoln, Placer Co. Foster, R. de L., from 1041 Sixth st. to 401-406 Granger Blk., San Diego. Hours: 10 A. M. to 12 M. and 2-5 P. M.

Galbraith, A. M., from San Lucas, Monterey Co., to Haywards, Alameda Co. Gwaltney, Sylvester, from 1617 Beacon st., San Pedro, to Mason Bldg., Los Angeles. Hours: 9 A. M. to 12 M.

Harper, C. W., Redding, gone East.

Joyce, E. Frances, from 1025 Steiner st., San Francisco, to Sonora, Tuolumne Co.

King, Jos. M., from 217 S. Broadway to 324 Douglas Bldg., Los Angeles. **Kitchings, J. T.**, from 906 Clay st. to N. W. cor. Twelfth and Jefferson sts., Oakland. Hours: 1:30-4 and 7-8 P. M.

Lorentzen, H. L., from 1031 McAllister st., San Francisco, to Petaluma, Sonoma Co. Hours: 2-4 and 7-8 P. M. **Lux, Fred W.**, from Mills Bldg. to James Flood Bldg., San Francisco.

Morrison, H. K., from add. unknown to Bakersfield, Kern Co.

Nuckolls, Wm. L., from Petaluma, Sonoma Co., to Kingsburg, Fresno Co. Hours: 10 A. M. to 12 M. and 1-4 and 8-9 P. M.

Osler, Charles, from Oakdale, Stanislaus Co., to Tuolumne, Tuolumne Co.

Page, Clarence, from add. unknown to Calistoga, Napa Co. Hours: 1-3 P. M.

Stirling, Charles, from San Leandro, Alameda Co., to St. Margaret's Sanitarium, Mayfield, Santa Clara Co. **Stirling, Marion**, from San Leandro, to St. Margaret's Sanitarium, Mayfield, Santa Clara Co. **Stratton, Robert T.**, from 1169 Broadway to 913 Market st., Oakland.

Thompson, J. E., from 751 Sutter st. to James Flood Bldg., San Francisco. Hours: 11 A. M. to 4 P. M.

Van Tassell, F. H., from add. unknown to Sonora, Tuolumne Co.

Wahl, Hugo A., from 415 Turk st. to 510 Ellis st., San Francisco. Weddle, Charles, from Kingsburg, Fresno Co., to Dinuba, Tulare Co. **Williams, Annie W.**, from Palmtag Bldg., Haywards, Alameda Co., to Hollister, San Benito Co. **Winterberg, W. H.**, from 813 Sutter st. to 1208 Van Ness ave., San Francisco. Hours: 3:30-5:30 P. M.

New Names.

Chain, John N., Eureka. Med. Dept. University of California '04. (C) '04.

Lampert, L., (E.) Eureka, Humboldt Co. Eclectic Medical College, New York, '96. (C) '97. Hours: 10 A. M. to 12 M. and 2-6 P. M.

Mayne, Wm. H., 223 Huntington Bldg., Los Angeles. Med. Dept. University of Southern California, '00. (C) '01. Hours: 10-11 A. M., 12 M. to 2 P. M. and 4-5 P. M.

Roberts, Wm. Henry, Groveland, Tuolumne Co. Hahnemann Medical College, San Francisco, '84. (C) '84.

New Members.

Bryan, E. H., Humboldt Co. Med. Soc.

Card, Egerton F., San Francisco Co. Med. Soc. **Chain, John N.**, Humboldt Co. Med. Soc. **Congdon, Chas. E.**, Tuolumne Co. Med. Soc. **Cottrell, E. L.**, Humboldt Co. Med. Soc.

Emerson, H. K., Los Angeles Co. Med. Soc.

Fales, Louis H., Humboldt Co. Med. Soc.

Gale, John A., Tuolumne Co. Med. Soc.

Holbrook, Geo. Story, Tuolumne Co. Med. Soc.

Joyce, E. Frances, Tuolumne Co. Med. Soc. **Judell, M. I.**, San Francisco Co. Med. Soc.

Mayne, Wm. H., Los Angeles Co. Med. Soc. **Morrison, H. K.**, Kern Co. Med. Soc. **Musgrave, Robt. W.**, Kings Co. Med. Soc.

Osler, Charles, Tuolumne Co. Med. Soc.

Roberts, Wm. Henry, Tuolumne Co. Med. Soc.

Spencer, J. F., Los Angeles Co. Med. Soc. **Stratton, D. E.**, Tuolumne Co. Med. Soc.

Whitsitt, Francis H., Kern Co. Med. Soc.

Died.

McAdams, R. J., Pasadena.
Wilson, Alexander L., Tulare.

RESULT OF EXAMINATION HELD APRIL 4th, 5th, 6th.

PASSED.

Coll. P. & S., S. F., Cal., 1904—75, 80⅝; 1905—79⅛, 80⅛, 75⅜.
Cooper Med. Coll., Cal., 1904—82⅞, 82⅛, 82; 1905—88⅜.
Hahnemann Med. Coll. of the Pac., Cal., 1903—75⅛; 1904—81⅝.
Univ. of Cal., Med. Dept., 1904—88⅜, 83⅝, 81⅛, 79⅛.
Albany Med. Coll., N. Y., 1892—82⅝.
Am. Med. Missionary Coll., Ill., 1904—84⅛.
Coll. of P. & S., Ill., 1902—76.
Coll. of P. & S., Edinburgh, Scotland, 1893—80⅜.
Coll. of P. & S., N. Y., 1902—87⅛.
Faculty of Med., Paris, France, 1905—86⅝.
Harvard Univ., Mass., 1898—77⅛.
Howard Univ., Med. Dept., 1896—80⅜.
Jefferson Med. Coll., Pa., 1885—84⅜.
Johns Hopkins Med. Sch., Baltimore, Md., 1899—82⅝.
Ky. School of Med., Ky., 1885—76⅝.
Marion-Sims Beaumont Coll. of Med., Mo., 1903—83⅜.

Northwestern Univ. Med. Sch., Ill., 1890—83⅝; 1901—89; 1903—80⅝.
Rush Med. Coll., Ill., 1903—87⅓.
Trinity Univ., Canada, 1904—80⅓.
Univ. of Georgetown, D. C., 1898—75⅝.
Univ. of Mich., 1901—75; 1902—87⅓.
Univ. of Minn., 1901—78⅝.
Univ. Med. Coll. of Mo., 1904—75⅓.
Univ. of Vt., 1904—77⅓.
Wash. Univ., Mo., 1903—75.

FAILED.

Coll. P. & S., S. F., Cal., 1905—71⅔; 1904—72⅔.
Cooper Med. Coll., S. F., Cal., 1903—70⅔.
Hahnemann Med. Coll. of the Pac., Cal., 1903—68⅔.
Univ. Southern California, 1904—57⅓.
Am. Med. Missionary Coll., Ill., 1900—67⅔.
Bennett Med. Coll., Ill., 1895—51⅓.
Central Coll. P. & S., Ind., 1886—64⅔.
Coll. of P. & S., Ill., 1901—68⅔.
Harvard Univ. Med. Sch., Mass., 1887—68⅓.
Hering Med. Coll., Ill., 1897—63⅔.
Ky. School of Med., Ky., 1890—43⅔.
Laura Memorial Woman's Coll., Ohio, 1903—62.
Long Island Coll. Hosp., N. Y., 1885—63⅓.
Rush Med. Coll., Ill., 1880—42.
Univ. of Mich., Med. Dept., Mich., 1872—43⅜: 1892—57⅓.
Univ. of Penn., Dept. of Med., Pa., 1899—64⅓.

Coll. P. & S., S. F., Cal., 1904—2 passed; 1 failed; 1905—3 passed; 1 failed.
Cooper Med. Coll., Cal., 1903—0 passed; 1 failed; 1904—3 passed; 0 failed. 1905—1 passed; 0 failed.
Hahnemann Med. Coll. of the Pac., Cal., 1903—1 passed; 1 failed. 1904—1 passed; 0 failed.
Univ. of Cal., Med. Dept., 1904—4 passed; 0 failed.
Univ. of Southern California, 1904—0 passed; 1 failed.

New Licentiates.

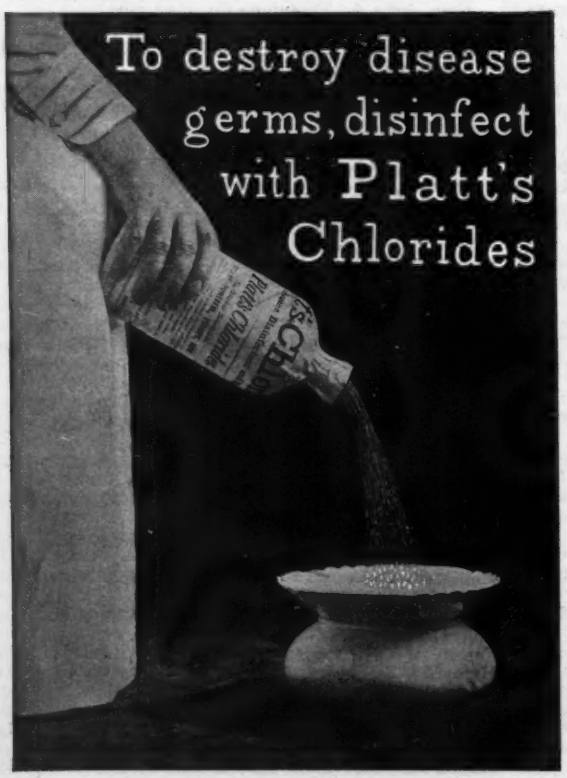
The following candidates were granted certificates: Adams, Jesse Lee, Jr.; Avery, Ralph W.; Balsiger, J. A.; Baumeister, E. E.; Bissell, Nelson C.; Blackman, Ernest L.; Brinkerhoff, Emilie; Carvin, C. LaVerna; Castlehun, Paul; Chappelle, C. C.; Davis, Frank C.; Davis, T. G.; Dawson, Thos.; Diddie, J. F.; Erb, C. M.; Fisher, Jas. T.; France, R.; Gibbons, Sherman S.; Hatton, Sarah J.; Kearney, W. B.; Linscott, Louise A.; Luton, Geo. R.; MacLafferty, N. C.; Martin, E. E.; Mead, L. D.; Newell, Edw.; Oldham, John T.; Palamountain, W. B.; Richardson, W. W.; Ricon, Joseph; Sandholdt, John P.; Saylor, B. F.; Simon, Ernest G.; Simpson, James; Thompson, E. H.; Thorpe, T. F.; Tourtillott, W. W.; Wiley, E. H.; Wilson, J. M.

Commends Dr. Bates' Paper.

EDITOR *N. A. R. D. Notes*:—I wish a marked copy of *Notes* containing Dr. W. E. Bates' article on "The Dangers of Proprietary Medicine Prescribing" could be sent to every physician in the country.

Dr. Walter E. Bates' paper on "The Dangers of Proprietary Medicine Prescribing" was originally read before a medical society in California and afterwards published in the CALIFORNIA STATE JOURNAL OF MEDICINE. Its publication in *Notes* last week has created a profound impression upon pharmacists and is sure to lead to constructive work having for its slogan: "Back to U. S. Pharmacopoeia and the National Formulary."—*N. A. R. D. Notes.*

At the last regular meeting of the California Academy of Sciences, held on Monday evening, April 17th, Dr. Louis C. Deane delivered a lecture entitled "Popular Fallacies Concerning the Eye." The lecture was interestingly illustrated with lantern slides.



IN an address on Pulmonary Tuberculosis read at the State Medical Association, Waco, Texas, Professor David R. Fly, A.M., M.D., stated: "The chief medium of contagion is the atmosphere impregnated with dry particles of sputum expectorated upon sidewalks, flooring, bed or clothes, etc. It is obvious, then, that those engaged in making beds, sweeping and dusting rooms occupied by tuberculous patients, are most exposed. This danger, however, can be materially lessened by sprinkling the rooms with a solution of Platt's Chlorides, one part to ten of water."

The cuspidor should be washed out daily with boiling water, and a mixture of one part Platt's Chlorides and four of water kept constantly in it to receive the sputum. The patient's clothing should be kept by itself, and thoroughly boiled when washed.

FORMULA—A combination of the saturated solutions of Chloride Salts proportioned as follows: Zn 40 per cent., Pb 20, per cent., Ca 15 per cent., Al 15 per cent., Mg 5 per cent. K 5 per cent.